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November 1, 2012

Mr. Michael E. Mayfield
Director, Advanced Reactor Program
Office of New Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Changes During Construction

Project Number: 689

Dear Mr. Mayfield:

On July 17, 2012, the Nuclear Energy Institute¹ (NEI) provided for NRC staff review proposed guidance for dealing with emergent changes during construction. The guidance is part of the broader staff review of NEI 96-07, Appendix C, *Guideline for Implementation of Change Control Processes for New Nuclear Power Plants Licensed Under 10 CFR Part 52*. We appreciate the staff's feedback on the proposed emergent change guidance in public meetings on September 6, September 20 and October 18, 2012. The purpose of this letter is to follow up on and reinforce key points from the October 18 public meeting to assist the staff's continuing review.

As discussed with the staff, licensees are concerned that the current process for making emergent changes during construction under 10 CFR Part 52 is proving challenging in the real world construction environment and is not necessary to assure public health and safety. A workable emergent change process is needed to avoid undue disruptions in the construction sequence. Proposed industry guidance in Section 4.1.1.1 of NEI 96-07, Appendix C, provides that licensees may, under emergent circumstances and provided that no license amendment is required, proceed with construction to resolve a nonconformance or other emergent condition in parallel with any required change to the licensing basis.

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.

Response to NRC Comments on Constructing in Accordance with the COL

In a letter dated August 31, 2012, the NRC staff provided the following comments on the proposed NEI guidance:

Continued construction is dependent upon the as-built plant correctly reflecting the [current licensing basis] CLB. Corrections of as-built, emergent, non-conformances with the CLB that are not reworked to reflect the CLB must be evaluated by the licensee's processes and procedures to update the CLB, and obtain prior NRC approval, if required, prior to the construction of the correction (repair or use-as-is).

Before commencing construction in accordance with a change to the CLB, including changes intended to correct the CLB, the appropriate change process must be completed as required.

The August 31 NRC comments did not provide a basis for the staff position. Since that time, however, the staff has pointed to existing NRC regulations during public meetings on the subject. Among the regulations cited by the staff are Section VIII.B.5.a of the design certification rules, 10 CFR 52.97(a)(1)(iii) and 10 CFR 50.10(c). NEI does not believe these or any other NRC regulations preclude the emergent change process guidance proposed by industry. In particular,

- Section VIII.B.5.a of the design certification rules does not constrain construction or the timing of construction; it constrains departures from Tier 2 information, i.e., departures from the licensing basis.
- While the Commission must find in accordance with 10 CFR 52.97(a)(1)(iii) that there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, construction has numerous interim states, and there is no NRC requirement that construction-in-progress conform at all times to the current licensing basis. Ultimately, per 10 CFR 52.97(b), verification of inspections, tests, analyses and acceptance criteria (ITAAC) provides reasonable assurance that the facility has been constructed in conformity with the license. During construction, licensee processes assure configuration control and that the facility is constructed in conformity with the license.
- 10 CFR 50.10(c) requires only that no person may begin construction without a permit or license. A COL holder complies with this requirement.

While not mentioned by the staff in connection with the regulatory basis for its position, the concept of construction-in-progress is acknowledged in 10 CFR 52.99(b), which states:

With respect to activities subject to an ITAAC, an applicant for a combined license may proceed at its own risk with design and procurement activities, and a licensee may proceed at its own risk with design, procurement, construction, and

preoperational activities, even though the NRC may not have found that any one of the prescribed acceptance criteria are met.

Additionally, the licensing basis for a combined license includes the applicable change processes in Part 50 and Section VIII of the referenced design certification rule as specified in 10 CFR 52.98. During construction, licensees are considered to be in compliance with the license provided construction is in accordance with the approved licensing basis, including changes/departures that have been or are being made in accordance with the requirements of the applicable change process(es). The license amendment request (LAR) process assures transparency to the public for all changes/departures that require prior NRC approval.

NEI further believes the proposed industry guidance is consistent with the Preliminary Amendment Request (PAR) process and the NRC's September 27, 2012, letter to Louisiana Energy Services, LLC, on a similar issue concerning changes during construction.

Attributes of the Proposed Process for Emergent Changes during Construction

As discussed with the staff on October 18, 2012, NEI supports a process that protects public health and safety, is consistent with NRC requirements and Commission policy, and enables COL holders to efficiently construct their facilities under a Part 52 combined license. Key attributes of this process include:

- Proper balance between design control and flexibility
- Configuration management and transparency for both NRC inspectors and licensees in connection with pending changes
- Assurance that the facility is constructed in conformity with the license.

A key objective of the industry's proposed guidance is a sound, workable and sustainable process for resolving emergent conditions (e.g., nonconformances) without undue disruptions in construction work flow. While most changes to resolve emergent conditions do not require prior NRC approval (i.e., license amendment), many impact design control document (DCD) Tier 2 or other licensing basis information. The process for changing the licensing basis, including completing and documenting the change/departure review, is disciplined and rigorous and can take days, or even weeks, to complete depending on the change and factors related to the licensee's organizational structure. As such, a process that does not permit construction to resolve an emergent condition in parallel with a required licensing basis change is problematic in a dynamic construction environment.

Changes to resolve emergent conditions are a large and important category of changes during construction of complex industrial facilities, and an efficient process for dealing with them is vital. Delaying construction for days or weeks pending completion of a licensing basis change is neither necessary nor appropriate for changes that do not require prior NRC approval.

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Under the industry-proposed guidance, a licensee may continue with construction activities to resolve emergent conditions based on an approved engineering solution and an assessment of its impact on the licensing basis—provided this assessment does not determine that an LAR is required. This work is considered at-risk because it is performed in parallel with any required change to the licensing basis, including completion and documentation of the change/departure review. If at any point it is determined that a proposed change/departure requires prior NRC approval, the licensee must submit an LAR and may submit a PAR. If a required LAR is ultimately denied by the NRC, the licensee must return the facility to its current licensing basis. As discussed with the NRC staff, licensee processes will assure configuration management and transparency of pending licensing basis changes in support of NRC's continuing inspection activities.

We believe the industry's proposed process properly balances design control with the flexibility needed in a dynamic construction environment, consistent with NRC requirements and Commission policy. As licensees and the NRC encounter challenges associated with first-ever construction under a Part 52 combined license, we appreciate the continued opportunity to engage the NRC staff to ensure that the intended objectives of Part 52 are met in real-world application.

We trust this letter is helpful to the staff's consideration of the information we provided in the October 18 public meeting. We look forward to receiving the staff's feedback and further interactions as necessary to facilitate finalizing guidance on emergent changes during construction and the whole of NEI 96-07, Appendix C, for final NRC review and endorsement.

If you have any questions, please contact me or Kati Austgen (202-739-8068; kra@nei.org).

Sincerely,



Russell J. Bell

c: Mr. David B. Matthews, NRO/DNRL, NRC
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