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October 23, 2018

Mr. Fred Brown
Director, Office of New Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: NEI White Paper: *Assessment of Licensing Impacts on Construction – Experience with Making Changes during Construction under Part 52*

Dear Mr. Brown:

The joint letter from NEI¹, NIC and NIA to NRC Chairman Svinicki dated January 23, 2018 identified four near term objectives to ensure that advanced reactors can be licensed and built in the U.S., thus helping preserve U.S. leadership in nuclear safety and technology. These objectives include:

- Reversing the trend of increasing regulatory costs and excessively long reviews for NRC license applications;
- Aligning the regulatory framework for advanced reactors with their inherent enhanced safety;
- Defining advanced reactor licensing options clearly, including options for staged applications and approval;
- Providing additional flexibility for changes during construction.

NEI activities to address these priorities include an assessment of licensing lessons learned based on experience with construction under 10 CFR Part 52. As you know, construction under Part 52 differs from construction under 10 CFR Part 50 in two key ways. First, under Part 52, ITAAC (inspections, tests, analyses and acceptance criteria) must be met or satisfied before the licensee is permitted to load fuel. In this regard, NEI is supporting Southern Nuclear Operating Company with first-ever implementation of the ITAAC process based on the NRC-endorsed industry guideline, NEI 08-01, *Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52*. We expect to update that NEI guidance to reflect lessons learned after the ITAAC process is completed for Vogtle Units 3 and 4.

Second, under Part 52 there is a license that must be maintained during construction. This means that in contrast to construction permit holders under Part 50, combined license (COL) holders under Part 52 are subject to NRC change control processes, and many changes are subject to NRC review and approval via license amendment requests (LAR). Making changes during construction even more challenging, the NRC

¹ The Nuclear Energy Institute (NEI) is responsible for establishing unified nuclear industry policy on behalf of its members on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include 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.

staff has interpreted Part 52 to require that construction must be in accordance with the plant licensing basis *at all times*. Accordingly, Part 52 licensees may proceed with construction that departs from the licensing basis only after 1) the licensee determines that an LAR is not required; or 2) the licensee develops and submits an LAR and the NRC reviews and approves it; or 3) the licensee receives a Preliminary Amendment Request (PAR) “no objection” letter from the NRC. The PAR “no objection” letter is provided only after the associated LAR is developed, submitted and accepted for review by the NRC.

As described in the attached NEI white paper, “Assessment of Licensing Impacts on Construction – Experience with Making Changes during Construction under Part 52” (see Attachment 1 to this letter), substantial experience to date indicates that the agency’s interpretation of the Part 52 change process has significantly impacted licensees during construction. While not a primary factor in the project delays at Vogtle 3/4 and Summer 2/3, the Part 52 change process has nevertheless disrupted work and increased licensing and engineering costs during construction without a corresponding safety benefit. Moreover, the current NRC interpretation that construction must be in accordance with the licensing basis at all times creates unnecessary ongoing risk during the entire construction period. It also creates the potential for costly construction delays due to emergent conditions that require prior NRC approval of LARs or PARs.

NRC licensees and prospective applicants understand the benefits of Part 52, as well as the obligations of a combined license holder to maintain the licensing basis and demonstrate via ITAAC that the facility is constructed and will be operated in accordance with the license and NRC rules and regulations. However, the NRC staff interpretation that requires continuous compliance with the licensing basis during construction is unnecessarily rigid, and has disrupted work and added cost to an already complex and tightly controlled project – without increasing safety. The attached NEI white paper concludes that to fully realize the Commission’s intent to provide licensees the flexibility needed to construct the facility, the NRC staff should revise its interpretation and implementation of the change process during facility construction. An alternative to the current NRC staff interpretation would simplify the process of making changes during construction without any adverse impact on safety, quality, or the objectives of Part 52.

The need for a change in the NRC staff interpretation of compliance during construction was highlighted by the recent experience of Southern Nuclear and KHNP related to the level of structural design detail in Tier 2* and Tier 1, respectively. In particular, while the NRC staff demonstrated some recognition and willingness to moderate the level of detail in Tier 2*/Tier 1, at the end of the day, both Southern and KHNP had to accept excessive structural design detail in Tier 2*/Tier1 without an adequate safety or regulatory basis from the staff. The result is the potential for unnecessary LARs to address departures having no safety significance, and the associated risk of construction delay or disruption.

A change to the NRC’s interpretation of compliance during construction would have a transformational impact in at least two key respects. First, as a practical matter, licensees would avoid the disruption, added cost, and risk of construction delay stemming from the current NRC staff interpretation. Second, a new interpretation would recognize and counter the perception that Part 52 is unworkable and overly intrusive on the construction process. This concern is frequently cited by prospective advanced reactor applicants as a basis for favoring the 10 CFR Part 50 licensing framework, or considering licensing new designs in other countries, despite the advantages of Part 52 and the maturing infrastructure that has evolved around it.

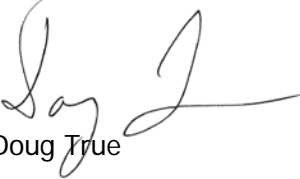
Mr. Fred Brown
October 23, 2018
Page 3

With these concerns in mind, a proposed alternative to requiring continuous compliance during construction is described in Attachment 2 to this letter.

We believe a new interpretation of compliance during construction can be adopted without rulemaking, and we encourage the earliest possible consideration of this issue so that current and prospective Part 52 licensees can quickly begin to benefit from the adoption of an alternative interpretation. If desired, the NRC staff and Commission could also choose to clarify the meaning of compliance during construction in connection with the upcoming (FY19) Part 50/52 rulemaking, e.g., in the Supplementary Information accompanying the final rule.

If you have any questions, please contact me or Mike Tschiltz (mdt@nei.org or 202-739-8083).

Sincerely,

A handwritten signature in black ink, appearing to read "Doug True", with a stylized flourish extending to the right.

Doug True

Attachments

c: Michael Johnson, Deputy EDO
Robert Taylor, NRO/DLSE
Anna Bradford, NRO/DEI