



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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January 24, 2018

MEMORANDUM TO: Joseph Colaccino, Chief
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Office of New Reactors

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SUBJECT: SUMMARY OF PUBLIC MEETING DISCUSSING NUCLEAR
ENERGY INSTITUTE'S LETTER ENTITLED "AVOIDING
DELAYS IN ISSUANCE OF NRC COMBINED LICENSES DUE
TO DESIGN CERTIFICATION ERRORS"

On December 13, 2017, staff from the U.S. Nuclear Regulatory Commission (NRC) conducted a Category 2 public meeting with the Nuclear Energy Institute (NEI) and other stakeholders to discuss an NEI letter received on August 4, 2017 that contained three proposals to address design control document (DCD) errors while avoiding delays in issuance of Combined Licenses (COLs). Meeting attendees are shown in Enclosure 1. Copies of presentation materials used by the NRC staff can be found in the Agencywide Documents Access and Management System (ADAMS) under Accession No. [ML17341A137](#). NEI's August 4, 2017 letter entitled "Avoiding Delays in Issuance of NRC Combined Licenses Due to Design Certification Errors," can be found under ADAMS Accession No. [ML17236A489](#).

BACKGROUND

The NEI letter, dated August 4, 2017, requested that NRC staff consider several options proposed by NEI for addressing the issue and that NRC staff determine which of these (or other) alternatives best provides a workable generic approach to resolve this issue.

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NEI's August 4, 2017 letter presented the following specific suggestions for avoiding delays in issuing COLs that reference a DC when an error is later found after rulemaking:

Proposal 1: Issuance of a License Condition: The NEI letter notes the Commission's "ministerial act" standard for License Conditions (LC), but states that an LC that defers resolution of the issue to a later license amendment or rulemaking satisfies this test. The letter also states that the "ministerial act" standard is a matter of policy and that the Commission can change this standard as long as "hearing rights are preserved".

Proposal 2: Use of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC): The NEI letter states that existing or new ITAAC could be used to resolve many, if not all, DCD design errors at the COL stage and that design acceptance criteria (DAC) are unnecessary for this purpose.

Proposal 3: Use of a Hybrid COL and construction permit (CP) issued under Title 10 Code of Federal Regulations (10 CFR) Part 50: The NEI letter states that a hybrid approach could be used such that a COL is issued for portions of the plant unaffected by the DCD error combined with a CP for those portions affected by the error. The NEI letter further states that the NRC "may be able to implement" a hybrid approach under existing regulations but recommends rulemaking to address certain procedural issues.

MEETING SUMMARY

NEI provided opening remarks regarding the background and rationale of their request. NRC staff briefly presented their understanding of both the requests and the specific proposals in NEI's August 4, 2017 letter and requested confirmation of NRC's understanding. NEI confirmed NRC's understanding and described their hope that the meeting will help to identify whether any of the proposals were considered implausible at this time, whether any of the proposals were preferable in NRC's opinion, and whether NRC staff had any additional suggested approaches.

NRC stated that comments and questions presented by the staff in the meeting, either verbally or in the presentation materials, were preliminary and should not be considered to be the agency's final position. They are instead intended to support constructive dialogue at the public meeting. The discussion of NEI's specific proposals, other potential approaches, NRC's presentation materials that are not reflected directly in this summary, and potential next steps are described below.

NRC and NEI Discussion of General Issues Related to All Potential Approaches

NEI indicated that stakeholders have cited COL issuance delays due to DC errors as a reason not to go forward with projects in the U.S. NEI emphasized that the problem stems from a process issue rather than a safety issue since the errors need to be resolved before operation. NEI said that the goals of its proposals are to avoid delays in both COL issuance and construction. NEI mentioned the high expense of keeping licensing infrastructure intact for a long period to support eventual COL issuance as errors were being corrected.

NRC made inquiries regarding a number of issues relevant to all potential approaches. NEI provided the following responses:

- When would the errors be corrected? NEI stated that errors would probably be corrected before construction of the affected structures, systems and components but that this is not specifically required by the regulations.
- NRC expressed a concern that if there are many errors or a complex error with extensive effects, any approach that defers the resolution of the error may be inconsistent with the principles of the 10 CFR Part 52, "Licenses, Certifications, Approvals for Nuclear Power Plants" licensing process. NRC also expressed a concern that a licensee might propose something that is not plausible such as issuance of a license amendment that conflicts with regulations. NEI responded that staff would not accept an implausible solution in the staff assessment. NEI did not suggest any firm thresholds, whether for timing, safety significance, or complexity and stated that the COL applicant and staff need to be convinced that the problem is solvable.
- NRC suggested that examples of how NEI's proposed approaches would work, either using examples from past challenges or hypothetical scenarios, would be critical to further development. NEI stated that it does not have the resources to work up perfect proposals and that NEI would prefer that the NRC staff tell them what approaches might be viable before expending resources to further refine or justify those approaches.
- NRC inquired whether NEI had a preferred approach out of the three proposals presented in their letter. NEI responded by stating that a license condition is the preferred approach, however, NEI stated that all three proposed options could likely be used for most scenarios.

NRC and NEI Discussion of NEI's Three Proposed Approaches

Proposal 1 (License Conditions)

One NRC staff member inquired what it means for an LC to be ministerial. An unaffiliated stakeholder responded that no safety evaluation (SE) is needed and stated that an LC based on a future license amendment request (LAR) or DC rulemaking is ministerial because an SE is not needed to close out the LC. In lieu of an SE, NRC would simply need to confirm that the LAR was approved or the rulemaking completed. The unaffiliated stakeholder further explained that both COL and CP safety findings are predictive; therefore, the reasonable assurance finding for both can be based on a future process. The unaffiliated stakeholder further stated that use of an LC supports a reasonable assurance finding but that the risk of any difficulties meeting an LC (e.g., issuance of a later amendment) is borne by the licensee.

NRC referenced a previous Commission decision related to Hydro Resources (CLI-00-08, 51 NRC 227) which rejected reliance on a later license amendment proceeding. An unaffiliated stakeholder observed that the example did not involve an LC. NRC replied that this distinction was not very substantive. NRC further stated that it would be hard to envision NRC acceptance of an LC that is just a promissory note. The unaffiliated stakeholder replied that the LC envisioned would be more substantive and include an acceptance criteria and a methodology. NEI noted that the methodology would typically have already been reviewed by NRC staff and NRC clarified that it would then be assumed to be approved as Tier 2 information in the relevant DCD.

NRC responded that if a COL applicant sufficiently defined the methodology and acceptance criteria, then the ministerial act standard would be met, and the COL application (COLA) would not need to rely on a later LAR or rulemaking proceeding. The unaffiliated stakeholder responded that even if not needed, NRC staff might want a future proceeding and further indicated that there had been such a case on an Advanced Boiling Water Reactor design issue that had both a methodology and acceptance criteria in which the staff required more design information.

Proposal 2 (ITAAC)

The discussion of the proposed approach focused on comparisons between potential use of DAC and ITAAC. NEI's letter stated that DAC would not be necessary. NEI clarified at the meeting that DAC should be left as an option in case it is needed. NEI indicated that if a new methodology is involved, an approach using DAC would be more likely.

NRC inquired whether an approach that includes just a methodology and an acceptance criterion would be considered a DAC. An unaffiliated stakeholder answered no and clarified that in many cases, staff approval is based on an acceptance criterion and a methodology for the ultimate function. The unaffiliated stakeholder further stated that with a DAC, there might not be an ultimate acceptance criteria. NEI further stated that a COL applicant is more likely to be dealing with situations simpler than those that require a DAC because the design has already been completed, and there is just an error in part of the design. An unaffiliated stakeholder further explained that if there is an error in the methodology, the COLA could specify a correction to the methodology or an alternative to the methodology. If a methodology error has no apparent fix, then use of a DAC, an LC, or the hybrid CP/COL option would be possible.

Proposal 3 (Hybrid CP/COL)

An unaffiliated stakeholder opened the discussion by noting that the Atomic Energy Act allows the combination of different licenses and permits. For example, a COL applicant requests approval of licenses in accordance with 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," Part 40, "Domestic Licensing of Source Material," and Part 70, "Domestic Licensing of Special Nuclear Material," in the COLA in order to receive, possess and use source, byproduct, and special nuclear material.

NRC stated that CPs and COLs are typically seen as separate and distinct licensing approaches and inquired how NEI envisioned mixing them. NRC further inquired what basis exists for issuing a partial COL as discussed in the letter. An unaffiliated stakeholder responded that NEI did not envision a "partial COL" and that NEI instead is proposing the use of a "full" COL in which there is an essentially complete design. Specifically, if there are just a handful of outstanding issues, the unaffiliated stakeholder asserted that a COL can be issued even if those unresolved issues mean that certain of the regulatory requirements listed in 10 CFR 52.79 are not met.

With respect to timing and process, an unaffiliated stakeholder stated that NEI hadn't worked out all the implementing details, but the following sequence is envisioned:

- The COL applicant would amend the existing application to treat the design error under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," regulations related to the issuance of a CP;

- There would be a right to late-filed contentions;
- There would be one safety analysis report/safety evaluation report (SAR/SER), a single proceeding, a single docket, a single EIS, and a single mandatory hearing;
- Interface requirements could be used to make the safety findings that are part of the COL;
- After construction, upon issuance of an operating license (OL) for the CP portion, the OL could be merged into the COL through a license amendment supported by an environmental assessment;
- The resulting license would be a COL under Atomic Energy Act 185b.

The unaffiliated stakeholder explained that hearing opportunities before operation for the above sequence would be the OL hearing opportunity on the unresolved design issue; the license amendment hearing opportunity for when the OL is merged into the COL, and the 10 CFR 52.103(g) hearing related to ITAAC for the COL. The unaffiliated stakeholder envisions that the above activities would have to happen prior to 10 CFR 52.103(g), and the 40 year license term would start upon completion of the 10 CFR 52.103(g) finding.

NRC suggested that an ITAAC could be used to govern closure of the CP issue and NEI was receptive to that concept. NRC further inquired whether NEI had considered issuance of a CP as an alternative to a hybrid CP/COL. An unaffiliated stakeholder said this was possible but that approach does not enjoy the advantages of 10 CFR Part 52 such as design finality, use of ITAAC, and the elimination of the need for a hearing at the OL stage on whether construction was substantially completed. NRC also noted that CPs can reference DCs (and finality would apply), that final safety findings may be made for CPs, and that 10 CFR 50.109 would apply to such findings.

NRC noted that use of a CP to resolve a design error pushed risks associated with delays to the COL licensee. An unaffiliated stakeholder agreed. NEI noted that this risk and the increased risk of a late-filed contention were unavoidable but that the approach would allow issuance of the COL and earlier start of construction.

NRC and NEI Discussion of Other Potential Approaches

NRC suggested that the term “error” was being used to describe post DC rulemaking information that challenges some aspect of the DC. Such a “post rulemaking information challenge” could in some cases be addressed relatively quickly by using more realistic analyses that evaluate a lower functionality and then addressing the margin associated with the degraded condition. NEI agreed this was a possible approach but stated a concern that such an approach would be subject to the same sorts of delays as correcting the errors, as well as a risk that NRC staff might not accept less conservative analyses.

NEI alternatively suggested re-examining the DC process, which resulted in discussion of the potential for development of an alternative DC revision path within a DC rule. Specifically, NEI suggested that a more expeditious, targeted rulemaking path could be developed for addressing

post-rulemaking information challenges, i.e., DC errors, that would ideally both shorten the current DC amendment process and avoid opening new issues.

NRC noted that for an individual issue, much of the potential delay is due to the fact that NRC must have a fully developed resolution to the problem before even starting rulemaking. NRC suggested that having a specific regulatory process for dealing with DC errors or post-rulemaking information challenges might still be possible via a DC rule that states that in some situations the DC remains fully in effect until the error is resolved while in other situations a COL referencing the DC cannot be issued because of safety significance.

NEI responded positively to this and a representative from NuScale suggested that this could be worth considering in the NuScale DC rulemaking process. NEI further suggested that this might be worth considering as part of the Commission directed rulemaking related to 10 CFR Parts 50 and 52 licensing process alignment. NRC indicated that the relevant rulemaking plan is still under development but that stakeholder input would be sought using NRC's regular rulemaking process which includes public outreach. Furthermore, both NEI and NRC have developed a preliminary list of potential issues to be addressed in the rulemaking and an alternative DC correction path may be worth including on either or both lists in preparation for future dialogue.

Discussion of Next Steps and Conclusion of the Public Meeting

NEI summarized that it would like to resolve the issue before upcoming COL applications and suggested a SECY paper with options, the 10 CFR Part 50 and 52 alignment rulemaking or the revision underway of Regulatory Guide 1.206 (DG-1325, "Applications for Nuclear Power Plants") as possible vehicles. NRC recommended that NEI develop examples of how NEI's proposals would work for either past issues or hypothetical issues. With regards to a SECY, the Commission would want to see detailed information to support staff statements related to any option and such examples would be critical. NEI further suggested that NRC develop a white paper to which NEI could respond. Ideally, the staff would indicate which options are viable and which are non-starters. The NRC staff did not make any commitments as to the development of a SECY paper or white paper.

NEI stated that they were satisfied that the staff had provided them meaningful feedback on their proposed approaches. Both NRC and NEI committed to revisit the issue of next steps at a later time.

NRC staff inquired if there were any comments or questions from the general public but received no response, upon which, the meeting was adjourned.

Enclosure:

1. Meeting Attendees

cc w/encl: NEI New Reactors Mailing List

J. Colaccino

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OFFICIAL RECORD COPY

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(Revised 11/17/2017)

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