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POLICY ISSUE (Notation Vote)

October 19, 2018

SECY-18-0106

FOR: The Commissioners

FROM: Margaret M. Doane
Executive Director for Operations

SUBJECT: CONSIDERATION IN THE RULEMAKING PROCESS OF ISSUE RAISED IN PETITION FOR RULEMAKING ON APPLICABILITY OF RISK-INFORMED CATEGORIZATION AND TREATMENT OF STRUCTURES, SYSTEMS, AND COMPONENTS FOR NUCLEAR POWER REACTORS (PRM-50-110; NRC-2015-0028)

PURPOSE:

The purpose of this paper is to obtain Commission approval to consider in the rulemaking process the issue raised in Petition for Rulemaking (PRM)-50-110, which was submitted by Mr. Michael D. Tschiltz on behalf of the Nuclear Energy Institute (NEI).

BACKGROUND:

On January 15, 2015, the U.S. Nuclear Regulatory Commission (NRC) received a PRM from Michael D. Tschiltz, on behalf of NEI, requesting that the NRC amend its regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.69, "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors," to clarify and extend their applicability to allow the licensees under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," to implement the provisions of § 50.69. Based on the technical merit of the petition, the NRC staff recommends that the Commission consider the issue raised in the petition.

Enclosure 3 transmitted herewith contains
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The NRC docketed the PRM on February 6, 2015, under Docket No. PRM-50-110. On March 27, 2015, the NRC published a notice of docketing in the *Federal Register* (80 FR 16308). The NRC staff determined that it had sufficient information to address the issue raised in the PRM, but nonetheless held a public meeting on September 16, 2015, to gain further understanding of the scope and basis of the PRM. The meeting summary¹ is available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML15268A353. The staff has continually provided 6-month updates to the petitioner, in accordance with 10 CFR 2.803.

DISCUSSION:

The Petition for Rulemaking

The petitioner requests that the NRC amend its regulations to clarify and extend the applicability of § 50.69 as it relates to the risk-informed categorization and treatment of structures, systems, and components (SSCs) for nuclear power reactors. The regulations in § 50.69 allow nuclear power plant licensees and certain applicants to seek NRC approval to comply with the § 50.69 requirements as an alternative to compliance with the requirements for RISC-3 and RISC-4 SSCs listed in § 50.69(b)(1)(i)-(xi). Currently, the applicability provisions in § 50.69 allow holders of a license under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," and 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," and license applicants under 10 CFR Part 50 and 10 CFR Part 52 to voluntarily request the NRC's review and approval to implement the provisions in § 50.69. However, because the "applicability" provisions in § 50.69(b) do not include combined license (COL) holders under 10 CFR Part 52, they cannot voluntarily request NRC review and approval to implement the provisions in § 50.69. The petitioner proposes a change to § 50.69 to allow COL holders to use the voluntary provisions of this regulation.

The petitioner asserted that preventing COL holders from using the provisions in § 50.69 is inappropriate and gave the following reasons in support of its position:

- A COL applicant that requests and receives NRC approval to implement the provisions in § 50.69 could later become a COL holder and therefore no longer be allowed to use the previous approval.
- As written, the rule denies applicability to plants possessing COLs for the life of the plant. A plant that currently holds a COL and that has been in operation for 15 years is in all practical matters no different than the current operating fleet, which, in accordance with the current rule language, can implement the provisions in § 50.69.
- COL holders must comply with the regulations in § 50.71(h)(1) and (2), which require COL holders to develop, maintain, and upgrade probabilistic risk assessments (PRAs) that address NRC-endorsed PRA consensus standards. Therefore, under the NRC's existing rules, COL holders will possess the necessary PRA infrastructure to effectively implement the provisions in § 50.69. In particular, these plants will have developed Level 1 and Level 2 PRAs before fuel load. These PRAs will have covered those initiating events and modes for which NRC-endorsed consensus standards exist.

¹ The meeting summary indicated that the NRC might issue a generic communication to clarify a misunderstanding of why COL holders were excluded from the 10 CFR 50.69 provisions. This omission was intentional for reasons explained in the "Discussion" section of this document. The attached Enclosure 1, "Federal Register notice," will clarify this subject, and there is no need to issue a separate generic communication.

Additionally, the NRC requires these plants to periodically (at least every 4 years) maintain and upgrade the PRA consistent with NRC-endorsed consensus standards until the permanent cessation of operations under § 52.110(a).

NRC Staff Evaluation of the Petition for Rulemaking

Under § 50.69, COL holders under 10 CFR Part 52 cannot use the provisions in § 50.69 to risk-inform the categorization of SSCs and change the treatment of those SSCs. This reflects the NRC staff's position adopted by the Commission in the final § 50.69 rulemaking (69 FR 68008; November 22, 2004). Although the Statement of Considerations for the proposed and final rules did not include the reasons for this exclusion of COL holders, the NRC staff learned from consulting with NRC staff members who developed the rule that they had two reasons for excluding COL holders, as stated below:

- (1) Amending the COL with a change as significant as § 50.69 implementation in the midst of construction and the closure of inspections, tests, analyses, and acceptance criteria (ITAAC) could complicate the ability to make a finding on the COL ITAAC in accordance with § 52.103(g). This concern could be mitigated if the NRC completed its § 52.103(g) finding before approving a license amendment authorizing § 50.69 implementation.
- (2) Issues could arise if the NRC reviewed and approved licenses under the deterministic approach, but then the license was modified using risk-informed approaches. This concern reflected uncertainty regarding the pedigree of the risk model that might support § 50.69 implementation, and could be mitigated if the PRA required under § 50.71(h)(1) and (2) were completed before the NRC issued a license amendment authorizing § 50.69 implementation.

The NRC did not receive public comment about the absence of a provision for COL holders in the applicability provisions of the 2003 proposed rule regarding § 50.69 (68 FR 26511; May 16, 2003). The final § 50.69 rule retained this feature of the proposed rule. In 2007, the NRC issued a final rule to revise 10 CFR Part 52 (72 FR 49352; August 28, 2007). The 2007 final rule left the applicability provisions unchanged; therefore, COL holders cannot request the NRC's review and approval to implement the provisions in § 50.69.

Options for Resolution of the Petition for Rulemaking

The NRC staff evaluated three options for resolving this petition for rulemaking:

- (1) **Option 1:** Request Commission approval to consider the issue raised in the PRM in the rulemaking process as a standalone rulemaking.
- (2) **Option 2:** Request Commission approval to consider the issue raised in the PRM as part of the Commission-directed rulemaking in Staff Requirements Memorandum (SRM)-SECY-15-0002, "Proposed Updates of Licensing Policies, Rules, and Guidance for Future New Reactor Applications," dated September 22, 2015 (ADAMS Accession No. ML15266A023).
- (3) **Option 3:** Deny the PRM because (1) it does not raise an immediate safety, environmental, or security concern and (2) resources available for the rulemaking are limited. If the Commission chooses this option, the NRC would use the exemption

process to consider COL holders' requests to use the voluntary provisions of § 50.69 for the affected licensees. All current COL holders could potentially submit such requests in the future.

Evaluation of Options

The NRC staff evaluated the three options, as follows:

- (1) **Option 1:** Consider the issue raised in the PRM and proceed with a standalone rulemaking.

Considering the issue raised in the PRM and proceeding with a standalone rulemaking would provide regulatory predictability and stability to those 10 CFR Part 52 licensees that wish to take advantage of the provisions in § 50.69 and could reduce unnecessary regulatory burden. The NRC staff agrees with the petitioner that a nuclear power plant that currently holds a COL and that has been in operation for 15 years is in all practical matters no different than the current operating fleet, which, in accordance with the current rule language, can implement the provisions in § 50.69. The NRC staff agrees that all COL holders that have developed a PRA in accordance with § 50.71(h) would possess the necessary PRA infrastructure to support an application for a license amendment to use the provisions in § 50.69.

A rulemaking to address the issue raised in the PRM would be more than an administrative change to the regulations, because the new requirement would need to ensure that voluntary implementation of the provisions in § 50.69 by COL holders does not complicate the process for closing ITAAC or the NRC's ability to render a decision in accordance with § 52.103(g) on facility operation. The new requirement would need to limit the adoption of provisions in § 50.69 by COL holders to periods following a finding on the COL ITAAC, in accordance with § 52.103(g). This rulemaking approach would alleviate the NRC staff's concerns described above and address the issue raised in the PRM.

The rulemaking would also benefit the NRC, because the agency would not need to expend resources in the future to evaluate exemptions to the regulations. Moreover, to the extent that COL holders obtain approval to implement the provisions in § 50.69, the NRC would benefit, because it could focus its oversight resources on more risk-significant aspects of those plants. However, under the Common Prioritization of Rulemaking, this rulemaking would likely be assigned a low or medium priority, and limited resources would accordingly be requested from the Commission while other higher-priority rulemakings are completed.

Option 2: Consider the issue raised in the PRM as part of the Commission-directed rulemaking in SRM-SECY-15-0002.

In SECY-15-0002, dated January 8, 2015 (ADAMS Accession No. ML13281A382), the NRC staff proposed a rulemaking to improve alignment between the new reactor licensing processes in 10 CFR Part 50 and 10 CFR Part 52 and to ensure that the application of safety standards is consistent, regardless of the process used to license a new reactor. In addition, the NRC staff proposed revisions to 10 CFR Part 50 and 10 CFR Part 52 and supporting regulations to reflect lessons learned from recent COL, design certification, and early site permit application reviews and construction of new reactors licensed under 10 CFR Part 52. Subsequently, in SRM-SECY-15-0002, the Commission approved the NRC staff's recommendations. The NRC staff plans to

begin this rulemaking in fiscal year 2019, consistent with Commission direction in the SRM that the staff should evaluate the priority and schedule in the context of Project Aim 2020 to ensure that the agency uses resources effectively.

As stated previously, the NRC staff agrees with the petitioner that a nuclear power plant that currently holds a COL and that has been in operation for 15 years is in all practical matters no different than the current operating fleet, which, in accordance with the current rule language, can implement the provisions in § 50.69. In addition, the NRC staff agrees that all COL holders that have developed a PRA in accordance with § 50.71(h) would possess the necessary PRA infrastructure to support an application for a license amendment to use the provisions in § 50.69.

As described in Option 1, the rulemaking to address the issue raised in the PRM would be more than an administrative change to the regulations. The new requirement would need to ensure that voluntary implementation of the newly crafted applicability provisions in § 50.69 by holders of a COL would not complicate the process for closing ITAAC or the NRC's ability to render a decision in accordance with § 52.103(g) about facility operation. The new requirement would need to limit the adoption of the provisions in § 50.69 by COL holders to periods following a finding on the COL ITAAC, in accordance with § 52.103(g). This rulemaking approach would alleviate the NRC staff's concerns described above and address the issue raised in the PRM.

In addition, accepting the PRM as part of this rulemaking would allow the NRC to realize efficiencies by not having to undertake a separate rulemaking. The issue raised in the PRM is within the scope of the Commission-directed rulemaking discussed above, because the rulemaking will address lessons learned from the issuance of COLs. Addressing the issue raised in PRM-50-110 in the "Incorporation of Lessons Learned From New Reactor Licensing Process (Parts 50 and 52 Licensing Process Alignment)" [NRC-2009-0196] rulemaking will allow the NRC staff to address the concerns presented in the petition, while ensuring that unintended consequences of the change are limited. Consistent with Commission's direction, the staff has budgeted for this rulemaking to begin in fiscal year 2019. The staff has commenced pre-rulemaking activities associated with this rulemaking effective October 1, 2018.

Option 3: Deny the petition.

If the petition is denied, the NRC staff will not pursue changes to § 50.69 to allow COL holders to use the voluntary provisions in the regulation. COL holders would be able to pursue the use of the voluntary provisions in the regulations if they request, and if the NRC could justify issuing, an exemption. Currently, no COL holders have requested an exemption; therefore, it may not be necessary to expend the resources to conduct a rulemaking to address the issue raised in the PRM.

Results of Evaluation of the Petition for Rulemaking

The NRC staff reviewed the issue raised in the PRM and determined that the PRM has technical merit. The NRC staff also determined that the concern regarding potential impact of § 50.69 implementation on § 52.103(g) can be addressed and that the "Incorporation of Lessons Learned From New Reactor Licensing Process (Parts 50 and 52 Licensing Process Alignment)" rulemaking should reconsider the provisions in § 50.69 for COL holders. Therefore, the NRC staff recommends that the Commission approve Option 2 (i.e., consider the issue raised in the PRM in the rulemaking approved by the Commission in SRM-SECY-15-0002).

The NRC staff recognizes that current COL holders may ask for exemptions to § 50.69 prior to or during the rulemaking effort to revise 10 CFR Part 52. The NRC staff will review and consider any exemptions in parallel with the rulemaking, if approved by the Commission, and may use those evaluations to inform the proposed rule.

RESOURCES:

Enclosure 3 includes an estimate of the resources needed to complete the proposed revisions to § 50.69.

RECOMMENDATIONS:

The NRC staff recommends that the Commission do the following:

- Approve Option 2 to consider the issue raised in PRM-50-110 in the rulemaking approved by the Commission in SRM-SECY-15-0002.
- Approve the publication of a *Federal Register* notice announcing the NRC's consideration of the PRM (Enclosure 1).
- Approve a letter, for the Secretary's signature, informing the petitioner of the Commission's decision concerning the PRM (Enclosure 2).

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections.



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Executive Director
for Operations

Enclosures:

1. *Federal Register* Notice
2. Letter to the Petitioner
3. Resources (non-public)

The Commissioners

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Commissioners' completed vote sheets/comments should be provided directly to the Office of the Secretary by COB Monday, November 15, 2019.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Monday, October 29, 2019, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

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ADAMS Accession No: ML16229A121; ML16229A101 (pkg.) *via email SECY-012

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