

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

[Docket No. PRM-50-110; NRC-2015-0028; NRC-2009-0196]

**Risk-Informed Categorization and Treatment of Structures, Systems, and
Components for Nuclear Power Reactors**

AGENCY: Nuclear Regulatory Commission.

ACTION: Petition for rulemaking; consideration in the rulemaking process.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) will consider, within the scope of a Commission-directed rulemaking (Incorporation of Lessons Learned from New Reactor Licensing Process (Parts 50 and 52 Licensing Process Alignment)), the issue raised in a petition for rulemaking (PRM) submitted by Michael D. Tschiltz, on behalf of the Nuclear Energy Institute (NEI), dated January 15, 2015. The petitioner requested that the NRC amend its regulations to clarify and extend the applicability of its regulations related to risk-informed categorization and treatment of structures, systems, and components (SSCs) for nuclear power reactors. The petition was docketed by the NRC on February 6, 2015, and was assigned Docket No. PRM-50-110. The NRC has determined that the PRM has merit and is appropriate for consideration in the rulemaking process.

DATES: The docket for the petition for rulemaking, PRM-50-110, is closed on **October 20, 2020**.

ADDRESSES: Please refer to Docket IDs NRC-2015-0028 and NRC-2009-0196 when contacting the NRC about the availability of information for this petition. You may obtain publicly-available information related to this action by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket IDs NRC-2015-0028 and NRC-2009-0196. Address questions about NRC dockets to Dawn Forder; telephone: 301-415-3407; e-mail: Dawn.Forder@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **The NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Document collection at <https://www.nrc.gov/reading-rm/adams.html>. For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.

- **Attention:** The PDR, where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via e-mail at PDR.Resource@nrc.gov or call 1-800-397-4209 between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: James O'Driscoll, Office of Nuclear Material Safety and Safeguards; U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-1325; e-mail: James.O'Driscoll@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. The Petition

The NRC received and docketed a PRM¹ dated January 15, 2015, submitted by Michael D. Tschiltz, on behalf of NEI. On March 27, 2015, the NRC published a notice of docketing in the *Federal Register* (80 FR 16308). The NRC held a public meeting on September 16, 2015, to gain further understanding of the scope and bases for the PRM. The meeting summary² is publicly available.

The petitioner asked the NRC to amend its regulations to clarify and extend the applicability of section 50.69 of title 10 of the *Code of Federal Regulations* (10 CFR), “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 implement the § 50.69 requirements as an alternative to compliance with the requirements for Risk-Informed Safety Class (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 nuclear power plant license under

¹ On February 25, 2014, Anthony Pietrangelo, on behalf of NEI (petitioner), submitted a letter (ADAMS Accession No. ML14056A278) requesting that the NRC issue a direct final rulemaking to amend § 50.69, “Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors,” making it applicable to holders of combined licenses (COLs). The NRC staff reviewed the petitioner’s request and concluded that it did not meet the NRC’s acceptance criteria in § 2.802(c) for a PRM because the request did not include a description of the petitioner’s grounds for and interest in the requested action. On April 11, 2014, under § 2.802(c), the NRC offered the petitioner an opportunity to meet the NRC’s petition acceptance criteria within 90 days. On January 15, 2015, Michael D. Tschiltz, on behalf of NEI, filed a PRM on the same topic, and included a description of the petitioner’s grounds for and interest in the requested action. The NRC determined that the petition met the threshold sufficiency requirements for a petition for rulemaking under § 2.802, “Petition for rulemaking,” and the petition was docketed as PRM-50-110.

² The meeting summary indicated that the NRC might issue a generic communication to clarify a misunderstanding of the reasons that COL holders were excluded from the § 50.69 provisions. The NRC will conduct rulemaking to determine if COL holders can use § 50.69; NRC will not issue a separate generic communication on this issue.

10 CFR parts 50, “Domestic Licensing of Production and Utilization Facilities,” and 54, “Requirements for Renewal of Operating Licenses for Nuclear Power Plants,” and certain applicants under 10 CFR parts 50 and 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants,” 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 COL holders under 10 CFR part 52, they cannot request the NRC’s review and approval to implement the provisions in § 50.69. The petitioner proposed 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 provided the following arguments 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, would no longer be allowed to use the previous approval.
- As written, the regulation 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, under the current rule language, can implement the provisions in § 50.69.
- Combined license holders must comply with the regulations in § 50.71(h)(1) and (2), which require COL holders to produce and maintain probabilistic risk assessments (PRAs) using NRC-endorsed PRA consensus standards.

Therefore, under the NRC’s existing rules, COL holders will possess the necessary PRA infrastructure to implement the provisions in § 50.69 effectively. 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. Additionally, the NRC requires these plants to periodically (every 4 years) maintain and upgrade the PRA consistent with NRC-endorsed consensus standards until the permanent cessation of operations under § 52.110(a).

II. Reasons for Consideration

The NRC agrees that the PRM has technical merit. The NRC will consider the issue raised in the PRM in its rulemaking process. The COL holders under 10 CFR part 52 currently cannot use the provisions in § 50.69 to risk-inform the categorization of SSCs and change the treatment of those SSCs.

The NRC did not receive public comment about the absence of an applicability provision in § 50.69 for COL holders in the 2003 proposed rule (68 FR 26511; May 16, 2003). The final provisions in § 50.69 issued on November 22, 2004 (69 FR 68008) 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) and left the applicability provisions unchanged. Therefore, COL holders currently cannot request the NRC's review and approval to implement the provisions in § 50.69.

Upon further consideration, the NRC agrees with the petitioner that a nuclear power plant that meets the requirements of § 50.69, whether licensed under part 50 or part 52, should have the opportunity to implement the provisions in § 50.69. The NRC agrees that all COL holders that have developed a PRA under § 50.71(h) should possess the necessary PRA infrastructure to support an application for a license amendment to use the provisions in § 50.69.

In 2015, the Commission directed the staff to revise the regulations in 10 CFR part 50 for new power reactor applications so that they align with the requirements in 10

CFR part 52. In addition, the staff was directed to revise the regulations in 10 CFR part 52 to reflect lessons learned from recent new reactor licensing activities.³ The NRC began this rulemaking in fiscal year 2019.

Therefore, the NRC will consider 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) rulemaking.

III. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

DOCUMENT	ADAMS ACCESSION NO. / <i>FEDERAL REGISTER</i> CITATION
Petition for Rulemaking to Amend 10 CFR 50.69, “Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors,” dated January 15, 2015.	ML15037A481
Notice of Docketing, “Applicability of Risk-Informed Categorization Regulation to Combined Licenses,” dated March 27, 2015.	80 FR 16308
Meeting Summary, “Discussion on the Petition for Rulemaking Related to 10 CFR 50.69, Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors,” dated September 25, 2015.	ML15268A353
Petition for Rulemaking, “Applicability of 10 CFR 50.69 to Holders of Combined Operating Licenses Under Part 52,” dated February 25, 2014.	ML14056A278

³ See SECY-15-0002, “Proposed Updates of Licensing Policies, Rules, and Guidance for Future New Reactor Applications,” dated January 8, 2015, and Staff Requirements Memorandum (SRM)-SECY-15-0002, “Proposed Updates of Licensing Policies, Rules, and Guidance for Future New Reactor Applications,” dated September 22, 2015.

Proposed Rule, “Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors; Proposed Rule,” dated May 16, 2003.	68 FR 26511
Final Rule, “Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors; Final Rule,” dated November 22, 2004.	69 FR 68008
Final Rule, “Licenses, Certifications, and Approvals for Nuclear Power Plants; Final Rule,” dated August 28, 2007.	72 FR 49352
SECY-15-0002, “Proposed Updates of Licensing Policies, Rules, and Guidance for Future New Reactor Applications,” dated January 8, 2015.	ML13281A382
SRM-SECY-15-0002, “Staff Requirements—SECY-15-0002—Proposed Updates of Licensing Policies, Rules, and Guidance for Future New Reactor Applications,” dated September 22, 2015.	ML15266A023

IV. Conclusion

For the reasons cited in this document, the NRC will consider the issue raised in the PRM in an ongoing rulemaking process.

The NRC tracks the status of PRMs on its Web site at <https://www.nrc.gov/about-nrc/regulatory/rulemaking/rules-petitions.html>. In addition, the Federal rulemaking Web site (<https://www.regulations.gov>) allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: (1) navigate to the docket folder (NRC-2009-0196); (2) click the “E-mail Alert” link; and (3) enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly). As in all rulemakings, the NRC will solicit and consider public comments during the proposed rule phase of the rulemaking, before determining the approach that will become the

basis for the final rule. Publication of this document in the *Federal Register* closes
Docket ID NRC-2015-0028 for PRM-50-110.

Dated: October 13, 2020.

For the Nuclear Regulatory Commission.

/RA/

Annette L. Vietti-Cook,
Secretary of the Commission