

**NUCLEAR REGULATORY COMMISSION**

**10 CFR Parts 2, 21, 26, 50, 51, 52, 55, and 73**

**[NRC-2009-0196]**

**RIN 3150-AI66**

**Alignment of Licensing Processes and Lessons Learned from New Reactor  
Licensing**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Regulatory basis; request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is requesting comments on a regulatory basis to support a proposed rule that would amend the NRC's regulations for the licensing of new nuclear power reactors. The NRC's goals in amending these regulations would be to ensure consistency in new reactor licensing reviews, provide for an efficient new reactor licensing process, reduce the need for exemptions from existing regulations and license amendment requests, address other new reactor licensing issues deemed relevant by the NRC, and support the principles of good regulation, specifically openness, clarity, and reliability. The NRC plans to hold a public meeting to promote a full understanding of the rulemaking, discuss the regulatory basis, and facilitate public participation.

**DATES:** Submit comments by **April 14, 2021**. Comments received after this date will be considered if it is practical to do so, but the NRC is only able to ensure consideration of comments received on or before this date.

**ADDRESSES:** You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the **Federal Rulemaking Web Site**:

- **Federal Rulemaking Web site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2009-0196**. Address questions about NRC dockets to Dawn Forder; telephone: 301-415-3407; e-mail: [Dawn.Forder@nrc.gov](mailto:Dawn.Forder@nrc.gov). For technical questions contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **E-mail comments to:** [Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov). If you do not receive an automatic e-mail reply confirming receipt, then contact us at 301-415-1677.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

**FOR FURTHER INFORMATION CONTACT:** James G. O’Driscoll, Office of Nuclear Material Safety and Safeguards; telephone: 301-415-1325; e-mail: [James.ODriscoll@nrc.gov](mailto:James.ODriscoll@nrc.gov); or Allen Fetter, Office of Nuclear Reactor Regulation; telephone: 301-415-8556; e-mail: [Allen.Fetter@nrc.gov](mailto:Allen.Fetter@nrc.gov). Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

**SUPPLEMENTARY INFORMATION:**

## I. Obtaining Information and Submitting Comments

### A. Obtaining Information

Please refer to Docket ID **NRC-2009-0196** when contacting the NRC about the availability of information for this action. 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 ID **NRC-2009-0196**.
- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." 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 [pdresource@nrc.gov](mailto:pdresource@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 [pdresource@nrc.gov](mailto:pdresource@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.

### B. Submitting Comments

Please include Docket ID **NRC-2009-0196** in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment

submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons to not include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS. Please note that the NRC will not provide formal written responses to each of the comments received on the regulatory basis. However, the NRC will consider all comments received in the rulemaking process.

## **II. Discussion**

The NRC is requesting comments on a regulatory basis to support a proposed rule that would amend the NRC's regulations for the licensing of new nuclear power reactors in parts 50 and 52 of title 10 of the *Code of Federal Regulations* (10 CFR). The NRC's goals in amending these regulations would be to ensure consistency in new reactor licensing reviews, provide for an efficient new reactor licensing process, reduce the need for exemptions from existing regulations and license amendment requests, address other new reactor licensing issues deemed relevant by the NRC, and support the principles of good regulation, specifically openness, clarity, and reliability. These rule changes would apply to any power reactor application submitted to the NRC. For example, the scope of impacted entities includes applicants for designs and facilities similar to large light water reactors operating today, new, large light water reactors (e.g., similar to the KHNP APR-1400 and Westinghouse AP1000), small modular reactors

(e.g., similar to NuScale small modular reactor), and non-light water reactors (e.g., high temperature gas reactor, fast reactors, and molten salt reactors)

On January 15, 2019, the NRC held a Category 3 public meeting to obtain feedback from external stakeholders on the scope of the development of the regulatory basis for this proposed rule. Representatives of the commercial nuclear power industry presented 18 suggested changes at the meeting and submitted a list of 20 additional suggested changes.

On September 20, 2019, the NRC met with individual members of the Regulatory Policies and Practices Subcommittee of the Advisory Committee on Reactor Safeguards (ACRS). The purpose of the meeting was to receive the ACRS members' observations on the implementation of the 10 CFR part 52 process based on their individual perspectives from their reviews of early site permit (ESP), design certification (DC), and combined license applications.

On November 21, 2019, and April 29, 2020, the NRC held Category 3 public meetings with members of the public to provide updates on the agency's efforts since the January 15, 2019, public meeting. In these meetings, the NRC provided updates on progress including an overview of the scope of the regulatory basis. At both meetings, the NRC conducted question and answer sessions. Consistent with the NRC's rulemaking process, the NRC has prepared a regulatory basis to describe and document the results of assessments performed by the NRC in support of the proposed rule. This regulatory basis and the meeting summaries, including transcripts, are listed in the "Availability of Documents" section of this document.

In the regulatory basis, the NRC concludes that there is sufficient basis to proceed with rulemaking to address the alignment of regulatory requirements associated with 10 CFR parts 50 and 52 and the incorporation of lessons learned from new reactor licensing reviews. However, through development of its regulatory basis, the NRC has

determined that some areas within the scope previously discussed could be addressed using other regulatory alternatives.

The Commission has not approved any specific recommendation in the regulatory basis at this time, and as such, any conclusions regarding the elements of the alignment of licensing processes and lessons learned from new reactor licensing process rulemaking are subject to change.

### **III. Specific Requests for Comments**

The NRC is requesting comment on the regulatory basis titled “Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing.” As you prepare your comments, consider the following general questions:

1. Is the NRC considering appropriate options for each regulatory area described in the regulatory basis?
2. Are there additional factors that the NRC should consider in each regulatory area? What are these factors?
3. Are there any additional options that the NRC should consider during development of the proposed rule?
4. Is there additional information concerning regulatory impacts that the NRC should include in its regulatory analysis for this rulemaking?

#### *Specific Regulatory Issues*

In addition to the general questions, the NRC has identified additional areas of consideration that could either be included in the scope of the alignment of licensing processes and lessons learned from new reactor licensing rulemaking or addressed through other actions. The NRC may include additional discussion of these issues in the

proposed rule, and if included, will use any public comments received regarding these issues to inform the development of the proposed rule. The NRC requests that members of the public answer the following specific questions regarding these additional regulatory issues.

### *Emergency Planning*

#### Significant Impediments to Development of Emergency Plans

As required by § 52.17(b)(1), the site safety analysis report for an ESP application must include an evaluation of the physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

1. The NRC is considering revising the guidance in Regulatory Guide 4.7, “General Site Suitability Criteria for Nuclear Power Stations,” and NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition,” Chapter 13, “Conduct of Operations,” on how to meet the requirements of § 52.17(b)(1) and the siting criteria in 10 CFR part 100, “Reactor site criteria,” as it relates to siting and emergency planning for ESP reviews. The NRC is seeking comment on the appropriate distance within which to perform the analysis to demonstrate compliance with the siting criteria for identifying site characteristics that could pose significant impediments to the development of emergency plans. Please provide a basis for your response.

### *Part 52 Process*

#### Standard Design Approvals Duration, Manufacturing License Renewal and Manufacturing License Expiration Date

As described in § 52.147, standard design approvals (SDAs) are valid for 15 years from the date of issuance and may not be renewed. For manufacturing licenses (MLs), § 52.173 specifies that a license authorizing manufacture of nuclear power reactors is valid for no more than 15 years from the date of issuance. As part of this rulemaking, the NRC is considering the removal of the 15-year duration for DCs established in § 52.55 and DC renewal requirements in §§ 52.57, 52.59, and 52.61 and 10 CFR part 52 DC appendices. This would result in DCs that never expire and, therefore, do not need to be renewed every 15 years. The 2007 10 CFR part 52 final rule provided the term of an SDA to be for 15 years and the term of an ML to be for no less than 5, or no more than 15 years from the date of issuance. The Commission established the 15-year maximum term for SDAs and MLs to be consistent with the maximum term for a standard design certification. The 5-year minimum term was established by the Commission to encourage the use of an ML for the manufacture of more than one nuclear power reactor.

2. If the NRC eliminates the renewal requirements for DCs, should the NRC consider eliminating or changing duration requirements for MLs?
3. If the NRC eliminates the renewal requirements for DCs, should the NRC consider eliminating or changing the duration requirements for SDAs?

#### Expired Design Certifications in 10 CFR part 52

As part of the proposed rule, the NRC is considering the removal of the 15-year duration for DCs established in § 52.55 and DC renewal requirements in §§ 52.57, 52.59, and 52.61 and 10 CFR part 52 DC appendices. This would result in DCs that never expire and, therefore, do not need to be renewed every 15 years. However, there are presently two DCs contained in the appendices to 10 CFR part 52 (AP600 and



System 80+) that have already expired.

4. Should the NRC remove expired DC rules from the appendices to 10 CFR part 52 in the proposed rule?

#### Relationship to Advanced Reactors

The current regulations in 10 CFR parts 50 and 52 were largely written during a period when the NRC was licensing light-water-reactors. Today, significant stakeholder interest exists in licensing new advanced non-light-water reactor designs. As such, in the proposed rule and in subsequent rulemakings addressing new licensing regulations for advanced reactors, the NRC wants to ensure that it considers stakeholder feedback on how regulatory changes would impact potential non-light-water reactor applicants.

For example, the NRC recommends revising § 50.34(f) so that the TMI requirements in § 50.34(f) apply to new power reactor applications submitted under 10 CFR part 50, with the same exceptions given for 10 CFR part 52 applicants. Section 50.34(f) requires 10 CFR part 52 applicants to provide information necessary to demonstrate compliance with any “technically relevant” positions of the requirements in § 50.34(f)(1) through (3) with the exception of § 50.34(f)(1)(xii), (f)(2)(ix), and (f)(3)(v). The NRC is still considering whether and how these regulations would apply to non-light water reactors.

5. Please provide feedback on impacts of the TMI requirements on non-LWR applicants the NRC should consider in the scope of the proposed rule. Please provide the basis for your answer.

#### **IV. Cumulative Effects of Regulation**

The cumulative effects of regulation (CER) describes the challenges that licensees or other impacted entities (such as State agency partners) may face while implementing new regulatory positions, programs, and requirements (e.g., rules, generic letters, backfits, inspections). The CER is an organizational effectiveness challenge that results from a licensee or impacted entity implementing a number of complex positions, programs, or requirements within a limited implementation period and with available resources (which may include limited available expertise to address a specific issue). The NRC has implemented CER enhancements to the rulemaking process to facilitate public involvement throughout the rulemaking process. Therefore, the NRC is specifically requesting comment on the cumulative effects that may result from this proposed rulemaking. In developing comments on the regulatory basis, consider the following questions:

1. In light of any current or projected CER challenges, what should be a reasonable effective date, compliance date, or submittal date(s) from the time the final rule is published to the actual implementation of any new proposed requirements, including changes to programs, procedures, or the facility?
2. If CER challenges currently exist or are expected, what should be done to address them? For example, if more time is required for implementation of the new requirements, what period of time is sufficient?
3. Do other regulatory actions (e.g., orders, generic communications, license amendment requests, and inspection findings of a generic nature) by the NRC or other agencies influence the implementation of the potential proposed requirements?
4. Are there unintended consequences? Does the potential proposed action create conditions that would be contrary to the potential proposed action's purpose and

objectives? If so, what are the consequences and how should they be addressed?

5. Please comment on NRC's costs and benefits estimate of the potential proposed action. This information will be used to support additional regulatory analysis by the NRC.

## V. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to write documents in a clear, concise, well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, "Plain Language in Government Writing," published in the *Federal Register* on June 10, 1998 (63 FR 31883). The NRC requests comment on this document with respect to the clarity and effectiveness of the language used.

## VI. Availability of Documents

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

<b>DOCUMENT</b>	<b>ADAMS ACCESSION NO. / WEB LINK / FEDERAL REGISTER CITATION</b>
Regulatory Basis for Rulemaking to Align Licensing Processes and Lessons Learned from New Reactor Licensing	ML20149K680
SECY-15-0002, "Proposed Updates of Licensing Policies, Rules and Guidance for Future New Reactor Applications," January 8, 2015	ML13277A420 (package)

SRM-SECY-15-0002, "Staff Requirements—SECY-15-0002—Proposed Updates of Licensing Policies, Rules and Guidance for Future New Reactor Applications," September 22, 2015	ML15266A023
Public Meeting Summary, "Summary of January 15, 2019, Public Meeting to Discuss the Proposed Rulemaking to Align the Regulations in Parts 50 and 52 to Address Updates to the Licensing Processes and Lessons Learned for Future New Reactor Applications," January 30, 2019	ML19023A046
SECY-19-0084, "Status of Rulemaking to Align Licensing Processes and Lessons Learned from New Reactor Licensing (RIN 3150-AI66)," August 27, 2019	ML19161A169 (package)
Transcript of the Advisory Committee on Reactor Safeguards Regulatory Policies & Practices-Part 50 52 Meeting - September 20, 2019	ML19294A009
Summary of November 21, 2019, Category 3 Public Meeting RE: Regulatory Basis: Rulemaking to Align Licensing Processes and Apply Lessons Learned from New Reactor Licensing (NRC-2009-0196)	ML19344C768
Summary of April 29, 2020, Public Meeting to Discuss the Status of Rulemaking to Align Licensing Processes and Apply Lessons Learned from New Reactor Licensing [NRC-2009-0196; RIN 3150-AI66]	ML20141L609
SECY-19-0034, "Improving Design Certification Content," April 24, 2019	ML19080A032
NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," with updates through 2007	<a href="https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/">https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/</a>
Regulatory Guide 4.7, Revision 3, "General Site Suitability Criteria for Nuclear Power Stations"	ML12188A053

The NRC may post additional materials related to this rulemaking activity to the Federal rulemaking website at [www.regulations.gov](http://www.regulations.gov) under Docket ID NRC-2009-0196. These documents will inform the public of the current status of this activity and/or provide additional material for use at future public meetings.

The Federal rulemaking website 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 "Sign up for E-mail Alerts" link; and 3) enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

Dated: January 19, 2021.

For the Nuclear Regulatory Commission.

/RA/

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