



NUCLEAR REGULATORY COMMISSION

10 CFR Parts 20, 30, and 51

NRC-2023-0071

RIN 3150-AL00

Regulatory Framework for Fusion Systems

AGENCY: Nuclear Regulatory Commission.

ACTION: Availability of preliminary proposed rule language; public meeting.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering amending its byproduct material regulations to establish a regulatory framework for fusion systems. The NRC is making available preliminary proposed rule language for a limited-scope, technology-inclusive framework that will be added to NRC's regulations in the *Code of Federal Regulations*. The NRC plans to hold public meetings in October and November 2023, to promote understanding of the preliminary proposed rule and facilitate transparency in its public rulemaking process.

DATES: The NRC plans to hold a series of public meetings on October 11, 2023, November 1, 2023, and November 9, 2023. See Section II, "Preliminary Proposed Rule Language and Public Meetings," of this document for more information on the meetings.

ADDRESSES: Please refer to Docket ID Docket ID NRC-2023-0071 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-2023-0071. Address questions about NRC Docket IDs to Dawn Forder; telephone: 301-415-3407; email: Dawn.Forder@nrc.gov. For technical

questions, contact the individuals listed in the “For Further Information Contact” section of this document.

- **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, at 301-415-4737, or by email to PDR.Resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in the SUPPLEMENTARY INFORMATION section.

- **NRC’s PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time, Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Dennis Andrukat, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-3561, email: Dennis.Andrukat@nrc.gov, and Duncan White, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-2598, email: Duncan.White@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Background

On January 14, 2019, the President signed into law the Nuclear Energy Innovation and Modernization Act (NEIMA), Pub. L. 115-439, 132 Stat. 5565. Among other things,

NEIMA directs the NRC to develop and establish, by December 31, 2027, a regulatory framework for fusion reactors.

In response to NEIMA and the continued development of fusion technologies, the Commission directed the NRC staff to proceed with a limited scope rulemaking in a staff requirements memorandum (SRM) dated April 13, 2023, SRM-SECY-23-0001 (ADAMS Accession No. ML23103A449), associated with SECY-23-0001, "Options for Licensing and Regulating Fusion Energy Systems," dated January 3, 2023 (ADAMS Accession No. ML22273A163). The NRC is proposing to amend its regulations at part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," in title 10 of the *Code of Federal Regulations* (10 CFR) to implement a regulatory framework for fusion systems. The NRC also is proposing similar changes to its regulations at 10 CFR part 20, "Standards for Protection Against Radiation," and part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

II. Preliminary Proposed Rule Language and Public Meetings

The NRC is developing preliminary proposed rule language to provide for the licensing and oversight of the broad array of fusion systems currently under development. The proposed rule would amend 10 CFR parts 20, 30, and 51. The scope of this rulemaking is to augment NRC's byproduct material framework to address licensing requirements for fusion systems that may be deployed in the near-term. The NRC will propose appropriate fusion-related definitions, requirements for the content of a licensing application, and other appropriate requirements.

The current preliminary proposed rule language is available on the Federal rulemaking Web site at <https://www.regulations.gov> under Docket ID NRC-2023-0071. The ADAMS accession number for the current preliminary proposed rule text is ML23258A145. This preliminary proposed rule language is draft and may be incomplete in one or more respects; however, the NRC welcomes discussion with stakeholders at

the public meetings to inform the NRC's rulemaking activity. The NRC may release additional preliminary proposed rule language throughout the development of the proposed rule.

The NRC plans to hold public meetings on October 11, 2023, November 1, 2023, and November 9, 2023. The meetings are noticed in the NRC's Public Meeting Notice System. The NRC is providing preliminary proposed rule language to increase transparency and to facilitate discussions with stakeholders on the regulatory framework for fusion systems. Please monitor the NRC's Public Meeting Notice System website at <https://www.nrc.gov/pmns/mtg> as the NRC may post materials for the public meetings at any time before to the start of each public meeting.

The NRC will post materials related to this rulemaking on the Federal rulemaking website at <https://www.regulations.gov> under Docket ID NRC-2023-0071. Please monitor the docket on <https://www.regulations.gov> and use the following information to sign up for docket alerts. 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-2023-0071); (2) click the "Sign up for E-mail Alerts" link; and (3) enter your email address and select how frequently you would like to receive emails (daily, weekly, or monthly).

Dated: September 29, 2023.
For the Nuclear Regulatory Commission.

Dafna E. Silberfeld, Acting Director,
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Financial Support,
Office of Nuclear Material Safety and
Safeguards.