

## U.S. Nuclear Regulatory Commission Public Meeting Summary

December 15, 2023

**Title:** Proposed Rule: Regulatory Framework for Fusion Systems

**Meeting Identifier:** [20231013](#)

**Date of Meeting:** November 1, 2023

**Location:** Webinar (via Microsoft Teams)

**Type of Meeting:** Information Meeting with a Question-and-Answer Session

### Purpose of Meeting:

The U.S. Nuclear Regulatory Commission (NRC) staff hosted three public meetings on the proposed rule that would form the regulatory framework for fusion systems under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material." The purpose of the three meetings was to share the staff's progress on the preliminary proposed rule language (on October 11, 2023), preliminary draft guidance (NUREG-1556, "Consolidated Guidance About Materials Licenses," Volume 22) (on November 1, 2023), and specific topics (on November 9, 2023). The November 1, 2023, meeting, the second of the three, focused on the staff's current preliminary draft guidance. The staff encouraged feedback from all stakeholders during these meetings. The staff will consider the feedback; however, no formal responses will be issued. This feedback discussion was intended to help staff develop the proposed rule.

### General Details:

The NRC is proposing to amend its regulations in 10 CFR Part 30 to provide a regulatory framework for fusion energy systems.

As part of the proposed rule, the NRC staff also intends to issue, for public comment, the following supporting materials:

- draft guidance under a new volume (Volume 22) of NUREG-1556,
- a draft regulatory analysis (cost analysis),
- an environmental assessment, and
- a supporting statement for any proposed information collections under the Paperwork Reduction Act.

The virtual meeting consisted of one NRC presentation providing the staff's current preliminary draft guidance followed by a question-and-answer session where the public was invited to share any feedback and questions to the NRC. The meeting was well attended by 136 participants, including academia, Agreement States, federal agencies, fusion industry, Fusion Industry Association, international stakeholders, non-government organizations, a tribal nation, other members of the public, and NRC staff.

### Summary of Presentation:

## Public Meeting on the Proposed Rule: Regulatory Framework for Fusion Systems

Dennis Andrukat of the NRC opened the meeting, introducing himself as the rulemaking project manager for this rule and acting as the meeting's facilitator. Mr. Andrukat described the purpose of the meeting which was to provide an overview of the proposed rule and to listen to public feedback on what the rulemaking should accomplish. Mr. Andrukat then discussed the meeting logistics and advised participants on the features of the webinar platform. Mr. Andrukat noted the agenda in which the first half of the meeting included a presentation by the NRC staff and an Agreement State stakeholder, followed by a short break, and the remaining half of the public meeting consisted of an open question and answer session. Mr. Andrukat provided instructions for how members of the public attending via Microsoft Teams or via the phone could ask questions or offer comments. Mr. Andrukat expressed the desire that the meeting will help the NRC staff better understand stakeholder ideas and concerns related to the development of the proposed rule. Mr. Andrukat encouraged public participation during the meeting from all stakeholders but noted that the NRC will not provide any formal responses to the feedback and questions offered during the meeting. Mr. Andrukat then introduced the speakers for this public meeting.

Mr. Andrukat then turned the meeting over to the NRC's Theresa Clark, Deputy Director for the Division of Materials Safety, Security, State, and Tribal Programs (MSST) in the Office of Nuclear Material Safety and Safeguards (NMSS). Ms. Clark welcomed everyone and gave the opening remarks before turning the meeting back over to Mr. Andrukat.

Mr. Andrukat provided additional meeting logistics and then turned the meeting over to the rulemaking's technical lead: the NRC's Duncan White, NMSS/MSST/SLPB, who commenced with the presentations. Mr. White began his slide presentation by providing a very brief overview of the rulemaking. During Mr. White's presentation, Diego Saenz of the State of Wisconsin was asked to provide an overview and insights regarding the State of Wisconsin's fusion licensing experience. Mr. White then proceeded to present the staff's current preliminary draft guidance, NUREG-1556, Volume 22, that included discussion on Agreement State & NRC interaction, licensing process, and contents of application.

This concluded the presentation portion of the meeting.

### **Public Feedback and Questions:**

Below is a summary of the feedback offered by the stakeholders for the NRC staff to consider as the NRC staff develops the draft proposed rule and guidance.

- In general, stakeholders continued to have no objection for the proposed use of a 10 CFR Part 30 byproduct material regulatory framework.
- The NRC staff's presentation and handout resulted in several stakeholder comments, questions, and suggestions for the NRC staff to consider including, guidance, contents of application, waste management, and general licensing process.
- Numerous stakeholders presented feedback related to the development of the proposed rule, related to environmental, and waste management.

## Public Meeting on the Proposed Rule: Regulatory Framework for Fusion Systems

- In general, stakeholders presented a friendly discussion environment and appreciated the staff's progress and interaction opportunities.

### Closing:

Mr. Andrukat made brief closing remarks, thanking everyone for their time and attention. Mr. Andrukat displayed a slide with the rule's [www.regulations.gov](http://www.regulations.gov) Docket ID number (NRC-2023-0071), the public repository for key documents related to the development of this rulemaking, as well as contact information and the NRC's new public website for [Fusion Systems](#).

Mr. Andrukat informed participants of the [public meeting feedback form](#) available on the [NRC Public Meeting Schedule website](#) and ended the meeting by stating that the NRC looks forward to the public's comments on the proposed rule.

### Action Items/Next Steps:

- The staff will review the public meeting's feedback for consideration in the drafting of the rule and guidance.
- The next public meeting will be held on November 9, 2023.

### Public Meeting Documents:

- [ML23258A168](#) – ADAMS PACKAGE: 11/1/2023 – Public Meeting -- Proposed Rule: Regulatory Framework for Fusion Systems
  - [ML23254A326](#) – 11/1/2023 – Notice of Public Meeting to Discuss the Proposed Rule: Regulatory Framework for Fusion Systems
  - [ML23258A171](#) – 11/1/2023 – Public Meeting Presentation -- Proposed Rule: Regulatory Framework for Fusion Systems
  - [ML23258A172](#) – 11/1/2023 – Public Meeting Handout – Preliminary Draft Guidance: Regulatory Framework for Fusion Systems
  - [ML23258A169](#) – 11/1/2023 – Public Meeting Summary -- Proposed Rule: Regulatory Framework for Fusion Systems

### Information Referenced During Public Meeting:

- [ML23258A146](#) – 10/11/2023 – Public Meeting Summary -- Proposed Rule: Regulatory Framework for Fusion Systems
- [ML22273A178](#) – SECY-23-0001, "Options for Licensing and Regulating Fusion Energy Systems," dated January 3, 2023
- [ML23103A449](#) – SRM-SECY-23-0001, "STAFF REQUIREMENTS – SECY-23-0001 – Options for Licensing and Regulating Fusion Energy Systems," dated April 13, 2023
- NUREG-1556, "Consolidated Guidance About Materials Licenses"  
<https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/index.html>
- NRC Public Website for Fusion Systems  
<https://www.nrc.gov/materials/fusion-energy-systems.html>
- NRC's Public Rulemaking Website - Regulatory Framework for Fusion Systems  
<https://rulemaking.nrc.gov/Rules/Detail/2185>
- Regulations.gov Website for Docket ID: NRC-2023-0071

## Public Meeting on the Proposed Rule: Regulatory Framework for Fusion Systems

- <https://www.regulations.gov/docket/NRC-2023-0071>
- NRC's Agreement States Website  
<https://www.nrc.gov/agreement-states.html>
- Low-Level Waste Compacts and the four current LLW facilities in the US  
<https://www.nrc.gov/agreement-states.html#compacts>

LIST OF ATTENDEES\*

November 1, 2023, PUBLIC MEETING – Proposed Rule: Regulatory Framework for Fusion Systems

**NRC**

Aaron Kwok  
Adelaide Giantelli  
Allyce Bolger  
Barry Miller  
Binesh Tharakan  
Blake Vaisey  
Bob Orlikowski  
Boby Abu-Eid  
Candace Spore  
Carolyn Wolf  
Carrie McCann  
Caylee Kenny  
Charles Murray  
Christian Einberg  
Christianne Ridge  
Christopher Ulmer  
Cindy Rosales-Cooper  
Colleen Casey  
Daniel Dimarco  
Dave McIntyre  
David Cullison  
Dennis Andrukat\*\*  
Duane White  
Duncan White\*\*  
Emma Duncan  
Ethan Licon  
Gary Purdy  
Huda Akhavannik  
Isaac Johnston  
Jackie Cook  
Jessica Bielecki  
Jill Shepherd  
Joey Rolland  
Jonathan Fiske  
Joseph Staudenmeier  
Kayla Gamin  
Kevin Williams  
Lee Smith  
Lisa Dimmick  
Marilyn Diaz Maldonado  
Michelle Albert  
Monica Ford  
Neil Sheehan  
Ossy Font  
Patricia Cline-Thomas  
Robert Tregoning  
Ronald Raunikar  
Ross Wagner  
Sarah Spence  
Sheldon Clark  
Soly Soto Lugo  
Steven Lynch  
Suzanne Dennis  
Theresa Clark\*\*  
Tricia Lizama  
Tyler Hammock

**EXTERNAL STAKEHOLDERS**

Adam Ekstedt  
Alyse Peterson  
Andrew Proffitt  
ANTHONY GARCIA  
Bethany Colling  
Bibake Uppal  
Bob Barkanic  
Brenda Garcia-Diaz  
Cameron Goodwin  
Cameron Hughes  
Cara MacDonald  
Caroline Anderson  
Charlyne Smith  
Chris Ajemian  
Corey Creveling  
Corinne Mitchell  
David Tiktinsky  
Diego Saenz\*\*  
Don Gregoire  
Erin Tindall  
Evan Koelker  
Floyd DesChamps  
Ian Irvin  
Ian Miner  
Jana Bergman  
Jane Hotchkiss  
Jasmin Hernandez  
Jay Paquette  
Jerry Bingaman  
John Fulton  
John Siciliano  
Jonathan Musgrove  
Juliana Pacheco Duarte  
Justin Cochran  
Kaci Studer  
Karen Gibson  
Kaylan Wade  
Lisa Davies  
Luke Olson  
M. Cromie  
Maniesha Singh  
Marion Cofer  
Mark Hernandez  
Matt HENDRICKSON  
Matthew Greenwood  
Matthew Lipka  
Megan Shober  
Megan Wart  
Melvin Weatherly  
Michael Costello  
Michael Ford  
Mike O'Neill  
Pascal Dumont  
Patrick White  
Phillip Peterson

**EXTERNAL STAKEHOLDERS**

Rich Hawryluk  
Rob Burg  
Rob Goldston  
Robert Jennings  
Robert Sindelar  
Ryan Crihfield  
Sachin Desai  
Saira Hashmi  
Sally Forbes  
Sam Wurzel  
Sara Castegini  
Scott Clausen  
Scott Hsu  
Sidney Fowler  
Stefanie Blum  
Stephanie Jacobs  
Steven Arndt  
Steven Pope  
Sujoyshen Meganathan  
Tatsuya Sakurahara  
Thomas Davis  
Tyler Ellis  
Victoria Diana Hypes-Mayfield  
Yutaka Kadoya  
Zak Koyn  
Tatsuya Sakurahara  
Thomas Davis  
Tyler Ellis  
Victoria Diana Hypes-Mayfield  
Yutaka Kadoya  
Zak Koyn

\* List does not contain attendees who participated via a phone line or who did not provide first and last names

\*\* Presenter