



UNITED STATES NUCLEAR INDUSTRY COUNCIL

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August 15, 2025

Mr. Mike King
Executive Director for Operations (Acting)
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ML25230A227

Subject: U.S. Nuclear Industry Council Comments on the “Development of a Proposed Rule to Address Licensing Requirements for Microreactors and Other Low Consequence Reactors”

Dear Mr. King:

Thank you for the opportunity for United States Nuclear Industry Council (USNIC) to provide comments at the Nuclear Regulatory Commission (NRC) public meetings on July 14th, 17th, and 18th, and to provide the following feedback related to developing a proposed rule to address licensing requirements for microreactors and other low consequence reactors.¹

The United States Nuclear Industry Council (USNIC) is the leading U.S. business advocate for advanced nuclear energy and promotion of the American supply chain globally. USNIC represents approximately 90 companies engaged in nuclear innovation and supply chain development, including technology developers, manufacturers, construction engineers, key utility movers, and service providers.

Leveraging the Existing Regulatory Framework Instead of a Large, Complex Rulemaking

NRC should not undertake a large complex rulemaking. When a new Part 56 rulemaking was publicly presented to Advanced Reactor stakeholders at a January 2025 NRC public meeting, there was no industry or non-government organization support for a broad new rulemaking. USNIC February 26, 2025 comments (ML25058A180) stated (in point 10 of attachment):

“Preparing a new Part 56 would be a waste of NRC resources, would take a long period of time to prepare and approve, and likely would not be useful. In a recent public meeting (January 16, 2025) where the potential for new Part 56 was discussed as a means of dispositioning the former Framework B, no support was expressed by any industry, non-government organization, or other stakeholder for such an approach.”

NRC is currently taking steps to ensure that regulatory requirements are appropriate for new reactor technologies, and is considering the direction provided by Congress, including the ADVANCE Act. Thus, we recommend that the NRC take a more focused rulemaking approach and only address issues that have not been previously successfully addressed. For example, in the statements of considerations to the rule, the staff should refer to other actions taken by the NRC that taken together can address low radiological consequence reactors. NRC should prioritize achieving the desired outcome efficiently and effectively, rather than deploying valuable staff, industry, and stakeholder resources on an overly broad rulemaking.

USNIC previously submitted a letter (ML25139A530) in support of ClearPath, Clean Air Task Force, and Veriten letter (ML25136A333)² to the NRC discussing how the NRC can create an

¹ <https://www.nrc.gov/pmns/mtg?do=details&Code=20250884>; <https://www.nrc.gov/pmns/mtg?do=details&Code=20250886>

² <https://www.nrc.gov/docs/ML2513/ML25136A333.pdf>

appropriate regulatory framework for new reactor technologies, as well as the ability to rapidly license a high-volume of new reactors. As discussed in that letter, the NRC should consider how low consequence facilities can benefit from new approaches being used today, including piloting such approaches where appropriate.

If the NRC proceeds with a rulemaking, the following comments based on the staff's presentations at the public meetings³ are to ensure that the rule is as useful as possible.

Rule Scope

USNIC recommends that the staff revise the scope of the rule to be focused on licensing framework for high volume deployment of new nuclear reactor technologies including for low consequence reactors. The staff should remove references to microreactors because the term "microreactor" is not a performance-based definition, and there is no widely agreed upon definition of "microreactor."

USNIC also encourages the NRC to explore how the outcome of this effort could be leveraged for both Part 50 and Part 52. The NRC should be working towards rapid and efficient licensing of all reactors, including efforts to transition reactors with a Part 50 license to Part 52 in order to rapidly scale reactor deployment.

Entry Criteria, Design Criteria Attributes, and Plant Parameter Envelope

The staff proposed three Entry Criteria: 1) Dose-Acceptance Criteria; 2) Maximum Hypothetical Accident Approach (Consequence Analysis); and 3) Special Nuclear Material (SNM) Limit (Metric Tons Uranium and Plutonium). Having multiple entry criterion that all need to be met is overly restrictive and NRC should consider only having single-entry criterion.

The Dose-Acceptance Criteria is a preferred approach, and a 1 rem over 4 days is a criterion that should be considered. This closely aligns with the NRC's Emergency Preparedness for Small Modular Reactors and Other New Technologies rulemaking ("EP rule").⁴ In particular, the EP rule uses "10 millisieverts (mSv) (1 rem) total effective dose equivalent (TEDE) over 96 hours".

We understand the Nuclear Energy Institute's (NEI) rapid high-volume deployable reactors (RHDR) proposal focuses on the Site Boundary Emergency Planning Zone as a defining criterion:

Site Boundary Emergency Planning Zone: A facility qualifies for a plume exposure pathway (PEP) Emergency Planning Zone (EPZ) that does not extend beyond the site boundary in accordance with the requirements of 10 CFR 50.33(g)(2).⁵

The NRC could allow either dose acceptance criterion or site boundary emergency planning zone as single-entry criterion.

The Maximum Hypothetical Accident Approach is an established process, detailed in NUREG-1537, and is being actively implemented by the industry. It does not require a new rulemaking and could be one acceptable method to meet the Dose Acceptance Criteria. NRC should accept alternative consequence analyses that would still meet the intent of the entry criteria (e.g., as opposed to limiting it to just MHA, and if an applicant has already performed consequence analyses that is not MHA, they should be able to use it).

³ ML25192A037; ML25196A357

⁴ <https://www.federalregister.gov/documents/2023/11/16/2023-25163/emergency-preparedness-for-small-modular-reactors-and-other-new-technologies>

⁵ <https://www.nrc.gov/docs/ML2521/ML25217A076.pdf>

As multiple USNIC members stated at the July 14th public meeting, the Special Nuclear Materials limit is not needed or appropriate because it is not performance-based or indicative of a reactor's risk.

General License

Enabling a general license for new nuclear technologies can fundamentally change the deployment process, especially for low consequence Nth of a Kind deployments. Based on the discussions at the July public meetings, a general license has merit, and Executive Order 14300 Section 5(e) directs the NRC to consider the use of general licenses.

In providing a general license in this rulemaking, the following should be addressed: (1) the scope, (2) how to assess including entry criteria and analysis, and (3) the benefits vs. proceeding with currently existing paths. ClearPath⁶ and Nuclear Energy Institute⁷ have suggested approaches, and they should be considered.

The NRC staff should continue outreach to industry, stakeholders, and other government agencies on the topic of a general license. Based on this feedback, the NRC staff should send recommendations to the Commission. The NRC staff also could recommend required legislative changes.

Unintended Consequences

The staff should consider unintended consequences. For example, changes to definitions could potentially impact Price-Anderson Act indemnification. While minimizing the insurance requirements might be appropriate, if indemnification were to become unavailable for "low consequence reactors" if they were excluded from the utilization facility definition that might not be a positive outcome. Other issues may develop as NRC coalesces on the words and definitions used in this rulemaking.

Environmental Reviews

The Commission voted on July 28, 2025, to approve SECY-24-0046, "Implementation of the Fiscal Responsibility Act of 2023 National Environmental Policy Act Amendments." Beyond that broad-scoped Part 51 rulemaking, it seems that additional rulemaking activities as part a separate low consequence reactor rulemaking are not necessary. Instead of promulgating certain NEPA implementing changes as part of the low consequence reactor rulemaking, the staff should expeditiously implement the Commission's direction related to SECY-24-0046. SRM-SECY-24-0046 states that "staff should examine what exactly narrowing the scope of our environmental reviews to only those environmental effects with a direct connection to radiological impacts would look like in practice and based on recent developments related to NEPA, including recent case law (e.g., Seven County Infrastructure Coalition v. Eagle County, Colorado, No. 23-975, 605 U.S. (2025)) and ongoing litigation, related Executive Orders, regulatory changes, and associated guidance." This direction in the SRM is ambiguous in terms of whether and how the staff should narrow the scope of environmental reviews or not in the development of the rule. The Commission should clarify this policy decision for the staff. The staff also should expeditiously complete the final rules for the ongoing Categorical Exclusion (CATEX) rulemaking and the New Reactor Generic Environmental Impact Statement (GEIS).

⁶ <https://www.nrc.gov/docs/ML2521/ML25216A114.pdf>

⁷ <https://www.nrc.gov/docs/ML2521/ML25217A076.pdf>

USNIC recommends that the staff, concurrently with preparing the draft rule, continue to seek input from industry and other stakeholders on key issues. This can improve the rule, identify barriers to implementation, identify any required legislative changes, and provide valuable input for the NRC Commissioner's vote on the draft proposed rule.

If you have any questions, please contact Cyril Draffin, Senior Fellow, New Nuclear, U.S. Nuclear Industry Council, cyril.draffin@usnic.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey S. Merrifield". The signature is fluid and cursive, with a prominent loop at the end.

Jeffrey S. Merrifield
Chairman, U.S. Nuclear Industry Council
Former Commissioner, U.S. NRC, 1998-2007