



August 26, 2026

U.S. Nuclear Regulatory Commission
11555 Rockville Pike,
Rockville, Maryland 20852

Subject: Public Comment on NRC's Proposed Modernizing Package Certification Requirements Rulemaking (Docket ID NRC-2025-1667-0001; RIN 3150-AL62)

Dear NRC Staff,

The Nuclear Innovation Alliance (NIA) is an independent, non-profit, non-partisan “think-and-do” tank whose mission is to help create the conditions for success for new nuclear energy so it can play a major role as an energy security and climate solution. Through policy analysis, research, outreach, and education, NIA is catalyzing the next era of nuclear energy. We focus on regulatory modernization, federal and state policy, and enabling private investment to support new reactor commercialization while meeting national environmental and energy security goals.

NIA appreciates the opportunity to comment on the proposed rule, Modernizing Package Certification Requirements, published on July 27, 2026. NIA appreciates the staff's effort to create a performance-based alternative transport package dose rate, but can only support the rule if it is both usable in practice and demonstrably protective of the public.

NRC is proposing to provide greater flexibility for applicants by introducing risk-informed methodologies for demonstrating safety requirements and by “providing an alternative radiation standard for approval of Type B packages for certain exclusive use shipments.” The preamble states that the proposed changes are driven by possible use of microreactors in emergency response scenarios. The evaluation of transport scenarios was performed by the Pacific Northwest National Lab (PNNL) and focused on a model that used a TRISO-based heat pipe microreactor. NIA has not previously found a compelling reason to change the radiation standards for transportation. However, NIA could be supportive of the proposed Part 71 optional framework if it is done in a manner that preserves public protection, maintains alignment with other federal agencies, and continues harmonization with international counterparts.

Summary of Key Points

NIA recommends that:

- If implementing the proposed 50 mrem/hour option, NRC do so in a manner that preserves the public-protection outcome embodied in the existing Department of

Transportation (DOT) requirements. The existing DOT dose limit should remain the default unless route selection, standoff, access controls, time limits, monitoring, contingency procedures, or other enforceable measures demonstrate equivalent or greater protection of the public.

- NRC and DOT use the current Transportation of Radioactive Materials Memorandum of Understanding¹ to ensure there is no conflict in regulations.
- NRC continue harmonization with international standards to allow developers to be competitive outside of the United States without added administrative burden on the NRC.
- NRC revise the provision in § 71.41(e) to allow submission of an alternative methodology “with or before” the associated application. NRC should allow concurrent review of the methodology and package application, establish objective acceptance criteria, and allow applicants to incorporate previously approved methodologies, topical reports, and transport package families by reference.
- Allow states to continue their prior inspection duties on transport packages that do not contain microreactors. The NRC should maintain sole control over microreactor shipments specifically.

Department of Transportation (DOT) Consistency and Radiation Limit Increase

The proposed language defines NRC and DOT as co-regulators that provide a consistent and comprehensive approach without duplication. However, it is unclear how much NRC communicated with DOT on this rule. For example, the proposed rule states that the NRC would certify packages with higher radiation levels that could exceed the limits currently permitted under DOT transport requirements 49 CFR 173.441. A shipper would need to obtain an exception or special permit from DOT requirements. NIA recommends that NRC and DOT continue to use their already existing memorandum of understanding to ensure there is no conflict in regulations. NRC should only promulgate a rule that requires DOT action in consultation with DOT, and document that consultation. NRC should produce guidance that explains how the process works to allow efficient approval from both agencies. NRC confirmed in the proposed rulemaking public meeting on August 5th that there would be no guidance prepared at this time and was not expecting it in the future.

If NRC implements the proposed 50 mrem/hour option, NIA recommends that it does so in a manner that preserves the public-protection outcome embodied in the existing DOT transportation requirements. NRC and DOT should coordinate implementation so applicants are not subject to duplicative technical reviews, but the purpose of that coordination should be maintaining the public-dose standard—not simply making the 50 mrem/hour option easier to use. Before authorizing use of the higher limit, NRC and DOT should require a transportation-specific demonstration addressing credible traffic delays, stops, inspections, breakdowns, nearby

¹ NRC and DOT Transportation of Radioactive Materials; Memorandum of Understanding
https://downloads.regulations.gov/PHMSA-2018-0081-0003/attachment_1.pdf

public occupancy, shipment frequency, and cumulative exposure. The existing DOT limit should remain the default unless route selection, standoff, access controls, time limits, monitoring, contingency procedures, or other enforceable measures demonstrate equivalent or greater protection of the public.

PNNL completed an evaluation of a scenario for an alternative radiation level limit at 2 meters from the vehicle used for transporting a microreactor of 0.5, 1.0, and 2.0 mSv/h (50, 100, and 200 mrem/h). While NIA commends the NRC for using this study to help provide confidence in the proposed change, NIA has concerns about the bounds of the study. The study only evaluated TRISO-based “heat pipe” microreactors. The proposed rule notes that any other package contents would have to be confirmed by the NRC.² Doing so will require licensees to seek exemptions based on reactor design, a pathway already available to applicants. NIA is encouraged by use of a performance-based option but sees the need for more clarity to provide the most efficient use of this rule.

In addition to the technical bounds of the study, a 50 mrem/hour limit at two meters could produce problematic public-exposure conditions under reasonable road-transport scenarios (including congestion, vehicle breakdowns, inspection stops, unplanned delays, or sustained occupancy in adjacent vehicles or buildings). For example, the report evaluates the radiation dose to a person caught in traffic as exposure to a loaded shipment for 1 hour at a distance of 1.2 m (3.9 ft) from the surface of the shipping container. This scenario does not accurately account for major incidents such as a road closure that would cause the vehicle to be caught in traffic next to the shipment for hours. As stated above, the proposed rule needs to ensure that public protection outcomes are preserved.

International consistency

NIA is concerned that creating an alternative transportation package dose rate could be disruptive for American developers exporting their products. The proposed rule notes that the new limit does not align with the International Atomic Energy Agency’s (IAEA) “Regulations for the Safe Transport of Radioactive Material” (SSR-6) for import into a foreign country. Developers opting to utilize the § 71.47(b)(3) requirements must revalidate their NRC-issued certificate of compliance with a “foreign Competent Authority against the requirements in the IAEA’s SSR-6 for import into a foreign country.” This could place additional burden on developers.

Further, the proposed rule indicates that NRC is revising § 71.45 to adopt the IAEA’s SSG-26, Rev. 1, Table IV.1. The language notes that the “alignment with international guidelines would eliminate discrepancies between U.S. and international requirements and reduce the burden on applicants seeking certification or revalidation of foreign packages.” NIA agrees that alignment

² Per the information available from microreactor companies currently engaged in pre-application engagement with the NRC, about half of the expected microreactors do not plan on using TRISO fuel.

would be helpful but generally the changes to the dose limit do not align with international standards and will place burden on the applicant if they choose to pursue international sales.

During the NRC public meeting on the proposed rule on August 5th, 2026, several international attendees, including from the Canadian Nuclear Safety Commission, asked questions about the proposed rule. Their active participation reflects the interest of the international community in this proposed rule. NIA recommends NRC carefully evaluate the interest in, the value of, and concerns about alternative dose rate limits. In general, NRC should continue harmonization with international standards to allow U.S. developers to be competitive outside of the United States.

Consistency Across Proposed Rulemakings

NIA previously addressed transportable microreactors in our proposed Part 57 public comment³ on NRC Specific Request for Comment Question 7-1⁴ and 7-3.⁵ While NIA still believes there is not an immediate need for an alternate dose rate for transport packages, NIA could be supportive of the Part 71 optional framework if it is done in a manner that preserves public protection, maintains alignment with other federal agencies, and continues harmonization on international standards. The NRC needs to ensure that changes in Part 57 align with Part 71.

Response to Part 57 question 7-1:

NIA believes that the current U.S. nuclear radiation framework generally works well but could certainly be improved. Any changes the U.S. makes in its radiation protection framework should be based on the best available scientific information and done through a transparent process that maintains public trust. Public trust is extremely important in maintaining the momentum of new nuclear energy. NIA does not see the need for alternate dose rates for transportable microreactors. The NRC would need to evaluate various traffic and design basis scenarios to determine whether to increase the dose rate. Additionally, the current transportation limits are aligned with other federal agencies and international standards. NIA recommends maintaining the current limits and including the option for exemptions.

Response to Part 57 question 7-3:

The current Part 71 dose limits were developed with coordination from the Department of Transportation. Additionally, these limits are closely aligned internationally with the International Atomic Energy Agency. NIA is concerned that creating an alternative transportation package dose rate could be disruptive for American developers exporting their products. Adopting new dose rates could become an administrative burden for the NRC to implement. NIA recommends NRC carefully evaluate the interest in, the value

³ <https://nuclearinnovationalliance.org/index%2Ephp/public-comment-part-57-rulemaking>

⁴ NRC asked provide feedback on the need for alternate dose rates for transportable microreactors, the technical basis for those alternate dose rates, and the safety implications for those alternative dose rates.

⁵ NRC asked provide feedback on the impact to international and interstate shipments if there were alternate transportation package dose rate limits for transportable microreactors.

of, and concerns about alternative dose rate limits. In general, NRC should continue harmonization with international standards to allow developers to be competitive outside of the US without an added administrative burden on the agency.

Make the proposed § 71.41(e) pathway executable

As stated previously, NIA could support an alternative framework if it is both usable in practice and demonstrably protective of the public. NIA recommends revising the provision to allow submission of an alternative methodology “with or before” the associated application. NRC should allow concurrent review of the methodology and package application, establish objective acceptance criteria, and allow applicants to incorporate previously approved methodologies, topical reports, and transport package families by reference. Performance-based regulation will enable innovation only if applicants can predict the required showing and avoid unnecessary serial reviews.

Coordination with Federal, State, or local inspection authorities

§ 71.47 applies to the transport of all radioactive materials, not just microreactors. The proposed rule correctly states in § 71.47 that “The licensee must coordinate in advance with the appropriate Federal, State or local inspection authorities to ensure those authorities are aware of the shipment and are prepared to conduct any required vehicle inspections.” Later in the proposed rule, the NRC states that § 71.47 is proposed to become a compatibility “Category NRC”, which is a change from the prior Category B. Category NRC does not allow program elements to be relinquished to the Agreement States under the Atomic Energy Act. This does not align with the prior statement that a licensee must coordinate with the appropriate Federal, State, or local inspection authorities and could present issues for non-microreactor packages. The change to Category NRC would not allow state inspectors to perform inspections or enforcement on radioactive waste or other byproduct material packages. NIA believes that this was not the intent of the proposed rule language. States should be allowed to continue their prior inspection duties on packages that do not contain microreactors and the NRC should maintain sole control over microreactor shipments specifically.

NIA thanks NRC staff, management, and the Commission for their continued efforts to develop performance-based licensing framework. If you have any questions, please contact Miranda McGuire at mmcguire@nuclearinnovationalliance.org.

Sincerely,

Judi Greenwald
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Nuclear Innovation Alliance