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NUCLEAR REGULATORY COMMISSION

10 CFR Part 71

[NRC-2025-1667]

RIN 3150-AL62

Modernizing Package Certification Requirements

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations governing the packaging and transportation of radioactive material. This proposed action is responsive to several executive orders and the NRC's mission to enable the safe and secure use of nuclear materials in an efficient and reliable manner. The proposed amendments would establish voluntary provisions 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 proposed rule would streamline application processes for package approval, remove unnecessary requirements, and clarify existing provisions.

DATES: Comments must be submitted electronically using <https://www.regulations.gov> by 11:59 p.m. eastern time on **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Submit your comments, identified by Docket ID NRC-2025-1667, at <https://www.regulations.gov>. If your material cannot be submitted using <https://www.regulations.gov>, call or email the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

Do not include any personally identifiable information (such as name, address, or other contact information) or confidential business information that you do not want publicly disclosed. All comments are public records; they are publicly displayed exactly as received, and will not be deleted, modified, or redacted. Comments may be submitted anonymously.

Follow the search instructions on <https://www.regulations.gov> to view public comments.

You can read a plain language description of this proposed rule at <https://www.regulations.gov/docket/NRC-2025-1667>. 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: Soly Soto Lugo, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-7258, email: soly.sotolugo@nrc.gov.

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I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2025-1667 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 Website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2025-1667.

- **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 "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. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of

Documents” 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.

- **Public Meeting:** The NRC may conduct a public meeting to describe the proposed amendments and answer questions from the public on the proposed rule. If the NRC determines it will hold a public meeting, NRC will publish a notice of the location, time, and agenda of the meeting on the NRC’s public meeting website within 10 calendar days of the meeting. Stakeholders should monitor the NRC’s public meeting website for information about the public meeting at: <https://www.nrc.gov/public-involve/public-meetings/index.cfm>.

B. Submitting Comments

Comments must be submitted electronically using <https://www.regulations.gov> no later than 11:59 p.m. eastern time on **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Please include Docket ID **NRC-2025-1667** in your comment submission.

II. Executive Order 14300: Ordering the Reform of the Nuclear Regulatory Commission

On May 23, 2025, President Donald J. Trump signed Executive Order (E.O.) 14300, “Ordering the Reform of the Nuclear Regulatory Commission.” Section 5, “Reforming and Modernizing the NRC’s Regulations,” requires the NRC to undertake a review and wholesale revision of its regulations and guidance documents as guided by the policies set forth in section 2 of the E.O. This rulemaking addresses section 5 of the

E.O., proposing changes pertaining to the packaging and transportation of radioactive material that would yield efficiencies and reduce regulatory burden for licensees and the NRC while maintaining reasonable assurance of adequate protection for public health and safety and the environment.

III. Background

Transportation of radioactive material in the United States has a strong historical safety record. Since the 1970s, millions of shipments of radioactive material—including medical isotopes, industrial sources, and spent nuclear fuel—have been safely transported worldwide. Overall, the historical safety record demonstrates that the transportation of radioactive material is one of the safest sectors of hazardous materials logistics, with no recorded fatalities or serious injuries attributable to radiation exposure during transport or as a result of a transportation accident.

The NRC's regulations for packaging and transportation of radioactive material are codified in title 10 of the *Code of Federal Regulations* (10 CFR) part 71, "Packaging and Transportation of Radioactive Material." These requirements provide the procedures and standards for package approval, preparation for shipment, and transportation of licensed material. The provisions apply to any NRC licensee authorized to receive, possess, use, or transfer licensed material, including those delivering licensed material to a carrier or transporting it offsite. Under 10 CFR part 71, the NRC reviews and certifies Type B (see § 71.4) and fissile material package designs to ensure adequate protection of public health and safety and the environment under normal and accident conditions of transport. The transportation of NRC-certified packages is subject to the U.S. Department of Transportation (DOT) hazardous materials regulations, which govern preparation, labeling, and operational controls. As co-regulators of radioactive material transport in the United States, NRC and DOT regulations provide a consistent,

comprehensive approach without duplicative requirements. Additional background information regarding the roles of the NRC and DOT is contained in a Memorandum of Understanding between the two agencies (44 FR 38690; July 2, 1979).

The NRC's requirements ensure the safe and reliable transport of radioactive material by establishing clear, well-defined design and performance criteria for Type B and fissile material transportation packages. Emerging technologies, such as microreactors, may present unique design, operational, and deployment considerations that warrant the use of different performance criteria. In particular, applications involving considerations that were not addressed in current regulations, such as limited cooling time for the fuel, may benefit from additional regulatory flexibility that continues to ensure reasonable assurance of adequate protection of public health and safety and the environment. This proposed rule seeks to provide such flexibility by allowing the regulatory framework to continue supporting innovation while preserving the safety objectives of 10 CFR part 71. These proposed changes support anticipated future transportation needs for microreactors and other new reactor designs, in line with E.O. 14300, which directs actions to enable safe and increased domestic deployment of new civilian nuclear reactor technologies.

IV. Discussion

The proposed revisions to 10 CFR part 71 are generally intended to add flexibility to the current regulatory framework and support the future domestic deployment of microreactors and other similar new nuclear technologies. Specifically, the proposed changes would:

1. Provide applicants seeking certification of transportation package designs with greater flexibility by allowing the voluntary use of alternative approaches—such as risk-informed or performance-based methods—to demonstrate

compliance with physical testing or analyses requirements specified in the NRC's transportation regulations.

2. Allow increased radiation level limits, under certain conditions, for approval of certain Type B packages, primarily to facilitate the certification of transportation package designs for microreactors, should such designs be submitted to the NRC for review.
3. Streamline requirements and reduce burden on holders of certificates of compliance, while reducing application review timelines.

A. Risk-Informed Alternatives for Package Design Certification Compliance

The NRC is proposing to revise § 71.41 to allow the use of an NRC-endorsed methodology as an alternative to meeting certain prescriptive requirements in 10 CFR part 71. This design certification pathway could, with appropriate justifications, allow a package designer to demonstrate that the transportation package meets or exceeds the current level of safety provided by the 10 CFR part 71 framework. Specifically, the proposed rule introduces a new paragraph, § 71.41(e), that explicitly identifies the availability of an optional framework for evaluating transportation package performance that would allow applicants to demonstrate an equivalent level of safety, as an alternative to meeting the specific physical testing requirements outlined for Type B packages in §§ 71.71, 71.73 and 71.61. The proposed § 71.41(e) would allow for the evaluation of packages through other methods of demonstration acceptable to the Commission, depending on the feature under consideration. These revisions align with the existing regulatory language in § 71.41(a).

Under this alternative approach, applicants would be permitted to reference a previously approved risk methodology or submit a risk-informed methodology for NRC approval in accordance with § 71.1(a) before submitting an application for a certificate of

compliance. The methodology would be required to provide a means for demonstrating adequate safety during transportation and be acceptable to the Commission. For example, the NRC has previously endorsed a risk-informed methodology in SECY-24-0062, “Risk-Informed Methodology for a Future Transportable Triso-Based Micro-Reactor Package Application,” for the Project PELE TRISO-based package. Adoption of a similarly acceptable risk-informed approach in future applications may provide applicants with enhanced flexibility and potential cost efficiencies.

The proposed voluntary approach would enable applicants to demonstrate compliance with existing package performance requirements in §§ 71.71, 71.73 and 71.61 by assessing the likelihood and consequences of potential transportation events, thereby meeting the NRC’s standard of reasonable assurance of adequate protection. The NRC anticipates that the use of other methods to address package response to normal and accident conditions in applications for package certification may be beneficial, offering an alternative to the current procedures found in §§ 71.41(c) and (d) for requesting package approval using different approaches. The proposed rule also includes minor changes to § 71.1, “Communications and Records,” to reflect this alternative, and to update the NRC’s address with the zip code.

B. Radiation Exposure Limits and Exclusive Use Requirements for Radioactive Material Packages

Currently, in accordance with 10 CFR part 71, subpart E, “Package Approval Standards,” package designs must be assessed for compliance with § 71.47, “External radiation standards for all packages.” Microreactor designs, including those for critical applications such as post-natural disaster (e.g., earthquake, hurricane) emergency response and remote power supply, may require the transportation of a fueled microreactor on accelerated timelines that may not allow for extended decay heat or

radiation level reduction through post-irradiation cooling (e.g., less than one-year of cooling). In such scenarios, external radiation levels during transport could exceed the 0.1 millisievert per hour (mSv/h) (10 millirem per hour (mrem/h)) at 2 meters (m) from the vehicle radiation level limit currently specified in § 71.47(b)(3). To achieve compliance with the radiation level limit in § 71.47(b)(3), which requires radiation levels for such a shipment not to exceed 0.1 mSv/h (10 mrem/h) at any point 2 m (80 in) from the outer lateral surfaces of the vehicle, package designs may necessitate additional shielding that increases package weight and size beyond feasible transportation limits, particularly for modes of transport subject to weight, dimensional, or infrastructure constraints.

These constraints could hinder the domestic deployment of microreactors for critical applications such as post-natural disaster (e.g., earthquake, hurricane) emergency response or remote power supply without a corresponding benefit to safety. Further, the existing radiation level limit may present an unnecessary regulatory constraint for certain microreactor transportation scenarios that were not contemplated when the existing provisions were established.

To address these challenges, this proposed rule would amend § 71.47 by adding new language to paragraph (b)(3). The existing external radiation standards in the current regulations would remain in place, but proposed revision to § 71.47(b)(3) would establish an additional, optional external radiation standard for certain package approvals by allowing higher radiation levels for certain packages, such as transportable microreactors under exclusive use controls, as defined in § 71.4. Public radiation exposures for single transportation events under this new proposed limit would fall well within the current annual 10 CFR part 20, "Standards for Protection Against Radiation," public radiation level limit (1 mSv (100 mrem)). The proposed new paragraph at § 71.47(b)(3) would establish radiation level limits that apply only under the normal transportation conditions under § 71.71.

The proposed limit in the revised § 71.47(b) is 0.5 mSv/h (50 mrem/h) at 2 m from the vehicle surface and would apply to certain approvals of packages for shipment that (1) are made under exclusive use provisions for normal conditions of transportation and (2) do not meet the 0.1 mSv/h (10 mrem/h) radiation level limit at 2 m (6.6 feet (ft)) from the vehicle in accordance with the existing language in § 71.47(b)(3). The proposed limit in the revised paragraph would be applicable to packages with contents which meet the definition of highway route controlled quantity (HRCQ) in 49 CFR 173.403, and which would, therefore, be required to meet applicable regulations of the Federal Motor Carrier Safety Administration (FMCSA). The FMCSA regulations enhance safety by minimizing access to HRCQ shipments from the public.

In developing a basis for the proposed addition of an optional higher radiation level limit in § 71.47(b)(3), the NRC staff, with assistance from the Pacific Northwest National Laboratory (PNNL) of the U.S. Department of Energy, examined potential public and occupational radiation exposures from postulated microreactor transportation scenarios. In the report PNNL-38760, "Microreactor Incident Free Transportation Radiation Dose Assessment," PNNL evaluated possible future microreactor transportation scenarios and estimated the public and occupational radiation exposures from those transportation scenarios which considered radiation level limits greater than the current limit in § 71.47(b)(3) (i.e., 0.1 mSv/h (10 mrem/h) at 2 m from the vehicle). The report considered alternative radiation level limits at 2 m from the vehicle used for transporting a microreactor of 0.5, 1.0, and 2.0 mSv/h (50, 100, and 200 mrem/h, respectively). The highest public radiation exposures calculated in the report for these scenarios were: (1) for a member of the public that might be caught in traffic within 2 m (6.6 feet) of a truck shipment of a package of radioactive material, and (2) for vehicle safety inspectors performing an inspection of the vehicle carrying the radioactive

material. The report indicated that doses to most other members of the public remain negligible.

Although the PNNL evaluation is considered bounding for the microreactor transportation scenarios analyzed in the study, it may not bound radiation fields associated with other Type B package contents, such as spent nuclear fuel assemblies or potential future microreactor concepts with differing source term characteristics. Use of the proposed limit in revised § 71.47(b) for package designs or contents that were not evaluated in the PNNL analysis (i.e., anything other than a TRISO based “heat pipe” microreactor) would therefore require the NRC staff to confirm, as part of the package approval process, that the radiation conditions associated with their specific design can be safely accommodated under the proposed limit.

Based on the results of the report, the NRC determined that the 0.5 mSv/h (50 mrem/h) at 2 m from the vehicle scenario, with established measures and controls for highway routing, rendered public radiation exposures for single transportation events well within the current annual 10 CFR part 20 public radiation level limit. Licensees consigning an irradiated microreactor to a carrier for transport would be required to comply with § 71.5, and, as appropriate, coordinate with Federal, State, or local inspection authorities along the transportation route of such transport to ensure awareness of the higher radiation levels associated with these packages. At the single inspection estimated radiation dose reported in PNNL-38760 for a 2 m radiation level limit of 0.5 mSv/h (50 mrem/h) (0.586 mSv (58.6 mrem)), a vehicle safety inspector could perform multiple inspections (estimated at 85) in a single year before approaching the occupational dose limit for radiation workers of 50 mSv/y (5,000 mrem/y).

Specifically, the proposed new requirements in § 71.47(b)(3) that must be met for use of the higher radiation level limit are as follows:

1. The package contents meet the definition of highway route controlled quantity specified in 49 CFR 173.403; and

2. 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. Such coordination must ensure that inspection personnel are informed of the radiological conditions and of any applicable controls needed to support inspection activities, including appropriate radiation dosimetry.

The proposed new § 71.47(b)(3) requirements are applicable to packages with contents which meet the definition of HRCQ in 49 CFR 173.403, as provided in proposed § 71.47(b)(3)(i), to ensure that packages with a higher radiation level at 2 m (6.6 ft.) from the vehicle are subject to the requirements of the FMCSA, which would include highway route planning and vehicle safety inspections. These requirements help to reduce the likelihood of a transportation incident and enhance the ability to prevent public access to the package during transportation. Irradiated microreactors will likely contain a quantity of radioactive material greater than 3,000 A₂. A₂ means the maximum activity (i.e., in Curies, millicuries, etc.) of radioactive material permitted in a Type A package. Activity in excess of A₂ must be placed in a Type B package for transport. A transportation package containing this quantity of radioactive material would meet the HRCQ definition in 49 CFR 173.403. HRCQ shipments are subject to routing requirements of 49 CFR part 397, "Transportation of Hazardous Materials; Driving and Parking Rules." It is important to note that HRCQ shipments can be made by all modes of transport, not just by highway. The HRCQ definition is based on package contents and is not mode specific.

HRCQ shipments are required to have a pre-shipment inspection, in accordance with 49 CFR 385.415. The proposed requirement in § 71.47(b)(3)(ii) for licensees to

coordinate in advance with the appropriate Federal, State or local inspection authorities is intended to ensure those inspection authorities are informed of the shipment and are prepared to conduct any required vehicle inspections or other activities to support the shipment. This coordination also seeks to help Federal, State or local inspection authorities ensure that inspectors are either qualified radiation workers or are otherwise adequately protected from exceeding annual public dose limits in 10 CFR part 20.

In support of inspections of shipments of licensed material involving packages of irradiated material—particularly shipments of a microreactor which may qualify as HRCQ shipments—licensees would benefit by conducting pre-shipment coordination with inspector organizations along the transport route. Such coordination will provide the opportunity for inspection authorities to ensure that properly trained personnel are available to safely conduct inspections in close proximity to the vehicle.

Under this proposed rule, the NRC would certify packages with higher radiation levels (50 mrem/h at 2 m from the vehicle) if approved following its safety review; however, packages approved for these higher radiation levels could exceed the limits currently permitted under DOT transport requirements (49 CFR 173.441). Consequently, a shipper who voluntarily seeks to use this flexibility under NRC requirements for package approval would need to obtain an exception or special permit from DOT requirements.

NRC certification of packages is limited to domestic shipment within the U.S., unless the NRC Certificate of Compliance is revalidated by a foreign Competent Authority against the requirements in the International Atomic Energy Agency's (IAEA) "Regulations for the Safe Transport of Radioactive Material" (SSR-6) for import into a foreign country. Since SSR-6 requirements do not have a similar provision for higher radiation levels for Type B packages, as described in the proposed new requirements in

10 CFR 71.47(b)(3), use of these requirements will be effectively limited to domestic U.S. shipments.

This proposed rule provides the public and stakeholders with the opportunity to provide feedback on the revised criteria for package certification for this voluntary approach for certification of packages allowing higher radiation levels during domestic shipments. The NRC plans to continue its practice of interagency coordination with Federal agencies, as well as coordination with State, local, and Tribal authorities, on this potential rule change. Consistent with Section VII of the Memorandum of Understanding between NRC and DOT (44 FR 38690; July 2, 1979), the NRC has engaged and intends to continue to engage with DOT to discuss the proposed rule changes and consult on proposed mechanisms to ensure alignment between NRC and DOT requirements.

C. Additional Changes to Part 71

This proposed rule also seeks to, among other things, streamline requirements, and reduce regulatory burden. The NRC considered removing certain unused provisions related to the air transport of plutonium in §§ 71.64, 71.74, and 71.88. However, the NRC did not remove these requirements because air transportation of plutonium has specific statutory requirements in the second undesignated paragraph in Section 201 of Public Law 94-79 and Section 5062 of Public Law 100-203.

The proposed rule also includes minor revisions to streamline 10 CFR part 71 and reduce regulatory burden. For example, the NRC proposes to revise § 71.45 to adopt the IAEA's SSG-26, Rev. 1, Table IV.1 design load values for lifting and tie-down standards. The NRC reviewed these requirements and determined they provide a level of safety equivalent to the current NRC requirements. The values originated through consensus by international experts and are published within international guidance documents. These consensus values are considered adequate to meet the applicable

international transport regulations, and the U.S. actively participated in their development. The proposed change would align U.S. requirements with the internationally endorsed standards that have undergone extensive expert review. This 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.

The proposed rule also includes minor revisions to §§ 71.17 and 71.95 to streamline reporting and submittal processes, as well as removing the definition of spent fuel from § 71.4. The proposed rule also makes a revision to § 71.5 to add a reference to FMCSA regulations in paragraphs (a) and (a)(2)(iv). Specifically, licensees should note that a shipment of an HRCQ of radioactive material is required to meet the applicable requirements in 49 CFR 385, consistent with current practice.

To improve the efficiency of report submittals, the NRC proposes to revise § 71.17(c)(3) to allow for the electronic submission of letters registering the first use of a package. Additionally, paragraph (c) of § 71.95, "Reports," would be revised to allow notifications and reports to be submitted electronically to the NRC's Document Control Desk or through the NRC's electronic submittal portal. These changes are expected to improve the timeliness of report receipt, thereby enhancing the NRC's ability to respond promptly to safety-related information.

Finally, the NRC proposes to remove the definition of "Spent nuclear fuel or Spent fuel" from 10 CFR part 71. While the definition of these terms appears in § 71.4, the terms "Spent nuclear fuel" or "Spent fuel" do not appear in any of the subsequent regulations in 10 CFR part 71. Further, the requirements of 10 CFR part 71 apply to transportation of irradiated fuel, regardless of cooling time. The removal of this definition furthers harmonization of U.S. regulations with IAEA international radioactive material transport regulations.

V. Specific Request for Comment

The NRC is seeking advice and recommendations from the public on the proposed rule. The NRC is particularly interested in comments and supporting rationale from the public on the following:

A proposed revision to § 71.47(b)(3) would establish an additional, optional external radiation standard for certain package approvals by allowing higher radiation levels for certain packages, such as transportable microreactors, under exclusive use controls. This revision is informed by the technical analysis in the PNNL report (PNNL-38760), which evaluated radiation dose scenarios for microreactor transportation. To help make the rule technology-neutral while also providing the necessary safety basis to meet the optional higher radiation levels, the proposed provision does not specifically reference transportable microreactors, but instead, requires that package contents meet the definition of HRCQ in 49 CFR 173.403. By meeting this definition, shipments would be required to meet applicable regulations of the FMCSA. The FMCSA regulations enhance safety by minimizing access to HRCQ shipments from the public and thus minimizing potential public exposure. This approach is intended to ensure enhanced safety controls while providing flexibility for certain packages that may share similar characteristics with microreactors and could exceed the current 0.1 mSv/h (10 mrem/h) limit at 2 meters from the vehicle.

1. If the NRC were to consider an alternative approach, what criteria should guide allowing the optional radiation standard for NRC-approved Type B packages that do not meet the HRCQ definition?
2. Are there certain scenarios where the NRC-approved Type B package contents would not meet the HRCQ definition but could still justify higher allowable radiation levels at 2 meters (6.6 ft) from the vehicle?

- a. Please describe the scenario and explain why higher radiation standards would be necessary and appropriate.
 - b. What requirements would be needed to minimize potential public and occupational exposure in such scenarios?
 - c. Provide your technical basis for these recommendations.
3. The technical basis for the proposed increased dose rate provisions in § 71.47(b)(3) is informed, in part, by the analysis presented in the PNNL-38760 report. While this report provides a valuable foundation, its scope may be limited by the current lack of detailed information regarding emerging microreactor designs. The report also does not encompass other types of radioactive material, such as nuclear reactor spent fuel, which may be subject to the proposed provisions. Recognizing these limitations and the potential for new data and operational experience to inform future regulatory decisions, the NRC is seeking stakeholder input on the following matter:
- a. Should the optional increased dose rate provision in § 71.47(b)(3) be applied broadly to all shipments of radioactive material, or should its use be subject to specific criteria, limitations, or circumstances? Please provide which criteria, limitations, or circumstances and provide your rationale and technical justification for your recommendations, including any supporting data or analysis.

VI. Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rule, if adopted, will not have a significant economic impact on a substantial number of small entities. This proposed rule would affect a number of “small entities” as defined by the Regulatory Flexibility Act or the size

standards established by the NRC (§ 2.810). However, as indicated in the draft regulatory analysis section, the proposed amendments, if promulgated, would not have a significant economic impact on the affected small entities.

Any small entity subject to this regulation that determines, because of its size, it is likely to bear a disproportionate adverse economic impact should notify the Commission of this opinion in a comment that indicates —

(a) The licensee's size and how the proposed regulation would impose a significant economic burden on the licensee as compared to the economic burden on a larger licensee;

(b) How the proposed regulations could be modified to take into account the licensee's differing needs or capabilities;

(c) The benefits that would accrue or the detriments that would be avoided if the proposed regulations were modified as suggested by the licensee;

(d) How the proposed regulation, as modified, would more closely equalize the impact of NRC regulations or create more equal access to the benefits of Federal programs as opposed to providing special advantages to any individual or group; and

(e) How the proposed regulation, as modified, would still adequately protect public health and safety and the environment.

Comments should be submitted as indicated under the ADDRESSES caption.

VII. Regulatory Analysis

The NRC is proposing amendments to 10 CFR part 71 to strengthen and streamline the regulatory framework to better support the future deployment of microreactors and other similar new nuclear technologies. The proposed changes in 10 CFR part 71 would allow applicants requesting certification of a transportation package design to use alternative approaches to demonstrate compliance with certain

transportation requirements, which would yield efficiencies and reduce regulatory burden for licensees and the NRC while maintaining reasonable assurance of adequate protection for public health and safety and the environment. The NRC anticipates the changes made in 10 CFR part 71 would strengthen the regulatory framework in support of deployment of microreactors and otherwise support a more technology-neutral regulatory framework. The NRC is proactively developing this proposed rule to account for anticipated advancements in nuclear technology. As a result, the rulemaking approach is intentionally technology neutral.

The proposed changes under § 71.41 include a new paragraph (e). The new language identifies the availability of an optional framework allowing applicants to use an alternative method for evaluating transportation package performance in order to demonstrate an equivalent level of safety for a certification review of a package design, in an application to the NRC, made in accordance with § 71.1(a).¹ The new language would allow applicants to demonstrate to the NRC, via a risk-informed and performance-based method that works best for the applicant, that their package design provides an equivalent level of safety as under the current regulations.

This proposed rule would also amend § 71.47 by new requirements under § 71.47(b)(3). The proposed new requirements address specific design and operational parameters for transportation of certain packages that might exceed currently allowed radiation dose rate limits. The proposed new provision would establish a voluntary external radiation standard for approval of packages for shipments by allowing higher radiation dose rates for exclusive use shipments of certain packages, such as transportable microreactors. Hence, vendors of microreactors would have the option to

¹ This new optional framework is intended to provide flexibility for future advanced technologies, with the goal of allowing applicants the ability to provide options that meet the NRC requirements but are more suited to the proposed design.

continue developing transportation packages based on current radiation level limits, or vendors could submit a design, or an amendment to the NRC for design changes, which, if approved, would allow an increase in radiation dose rate at 2 m from the vehicle.

Vendors who choose to maintain the status quo would see no change to their monetary commitment in the construction of their transportable package. However, the NRC's Subject Matter Experts (SMEs) anticipate vendors would change to a design that meets the new acceptable radiation dose level of 50 mrem at 2 m from the vehicle (up from 10 mrem) to take advantage of the flexibility the proposed rule provides in the construction of transportable packages for certain shipments. The NRC anticipates that vendors who change to a design that meets the new, alternative radiation standard would realize a monetary saving due to the additional flexibility in the design afforded by the new radiation standard for certain transportable packages. Although there is no data that can identify how a vendor would design their transportable package under this newly proposed standard, given the numerous design options a vendor may take, the NRC anticipates a transportation package design meeting this newly proposed standard would have a substantial overall cost-savings over time.

To illustrate potential savings associated with proposed § 71.47, the NRC has assessed a hypothetical transportation package design that would meet the new radiation standard with reduced package shielding on 5 sides of the package walls that are impacting the 2 m vehicle distance of radiation exposure requirement. Using a shielding material composed of carbon steel (as an example), SMEs have estimated an overall reduction of half inch (moving from a 2-inch plate to a 1.5-inch plate) would have a potential savings of approximately \$25,000 dollars per package. In addition, the perceived estimated net average growth rate of microreactors coming on-line over a 40-

year period of analysis is 2,102 microreactors². If we assume that all microreactors built had their shielding reduced by .5 inches, the industry could experience a cost-savings of \$52.5 million (undiscounted) over a 40-year period, with an annualized savings of \$ 0.48 million at 7 percent. Table 1 gives a truncated summary accounting schedule for potential industry cost-savings over 40 years.

Table 1 Estimated Hypothetical Cost – Savings from Vendors Design of Transportation Package Under Proposed Optional Design Standards

Mean Estimate					
Compounded Population Growth	Annual Growth	Year	Undiscounted	7%	3%
3	3	1	\$ 75,000	\$ 70,093	\$ 72,816
8	5	2	\$ 125,000	\$ 109,180	\$ 117,824
11	3	3	\$ 75,000	\$ 61,222	\$ 68,636
13	2	4	\$ 50,000	\$ 38,145	\$ 44,424
15	2	5	\$ 50,000	\$ 35,649	\$ 43,130
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1193	157	36	\$ 3,925,000	\$ 343,577	\$ 1,354,252
1374	181	37	\$ 4,525,000	\$ 370,185	\$ 1,515,798
1583	209	38	\$ 5,225,000	\$ 399,487	\$ 1,699,307
1823	240	39	\$ 6,000,000	\$ 428,730	\$ 1,894,521
2101	278	40	\$ 6,950,000	\$ 464,124	\$ 2,130,570
Total	2101		\$ 52,525,000	\$ 6,350,920	\$ 20,032,946
Annualized				\$476,377	\$866,673

In addition to the savings based on proposed optional design standards for certain transportation packages, the SMEs also anticipate additional savings from the actual transportation of the package due to the reduction in package weight. Although currently there is no data or logistical premise to measure potential savings, the NRC

² Licensing Requirements for Microreactors and Other Reactors With Comparable Risk Profiles, Proposed rule (91 FR 23628; May 15, 2026).

anticipates a substantial cost-savings due to a reduction in fuel use and wear and tear of the transportation vehicle.³

Finally, applicants are not obligated to undertake any activity under these requirements. The NRC anticipates that none of the changes proposed in 10 CFR part 71 will create any added burden to future applicants for package certification. Conversely, the NRC does anticipate the changes to 10 CFR part 71 would create an economic benefit for applicants and certificate holders, since they will now be able to streamline their processes to meet both their operational needs and regulatory obligations. At this time, NRC is limited in quantifying the benefits applicants might incur from the proposed changes since actual data is not available.

VIII. Backfitting and Issue Finality

The NRC has determined that the backfit rule, which is found in §§ 50.109, 70.76, 72.62, 76.76, and 10 CFR part 52, does not apply to this proposed rule because the proposed amendments do not involve any provisions that would impose backfits as defined in 10 CFR chapter I or affect the issue finality of any approval issued under 10 CFR part 52. There is no backfit provision in 10 CFR part 71.

The backfitting and issue finality provisions under 10 CFR parts 50, 52, 70, 72, and 76 apply to activities directly regulated under those parts of the NRC's regulations and do not apply to activities regulated under other parts that do not include backfitting or issue finality provisions. The exception to this general principle is where the activity regulated under other parts that do not include backfitting or issue finality provisions is an inextricable part of the regulated activity within the scope of backfitting or issue finality. The activity that would be regulated by this proposed rule, i.e., certification of

³ Estimated savings are not dependent on amendments to DOT requirements.

packages and the preparation of packages for transportation, is not an inextricable part of the procedures or organization required to design, construct, or operate a facility as licensed under 10 CFR part 50, 52, 70, 72, or 76; rather, it is a separate activity that these licensees may choose to undertake. The scope of this proposed rule does not include any changes to any of those facilities or plants' activities for which the backfitting and issue finality provisions apply.

IX. Cumulative Effects of Regulation

The NRC seeks to minimize potential negative consequences resulting from the cumulative effects of regulation (CER). The NRC believes that the de-regulatory impacts of this rulemaking activity are unlikely to cause implementation challenges for stakeholders. In addition, during the pendency of this rulemaking, the NRC is deprioritizing issuance of regulatory actions that might influence the implementation date for the new rule requirements (e.g., orders, generic communications, license amendment requests, and inspection findings of a generic nature).

To fully understand any potential CER implications that could result from this rulemaking, the NRC is asking the following questions. Response to these questions is voluntary and any input will be considered during development of the final rule.

1. The NRC is proposing an effective date that will be 30 days after the date of publication of a final rule. Does this provide sufficient time to implement the proposed requirements? Please provide a rationale for your response.

2. Are there unintended consequences related to this rulemaking and how should they be addressed? Please provide a rationale for your response.

3. Please comment on the NRC's cost and benefit estimates in the regulatory analysis that supports this proposed rule. Please comment on how to quantify unquantified portions of this analysis. NRC acknowledges difficulties in developing

scenarios involving future advanced technologies that have not yet been commercially realized, and would like to refine these estimates to produce agency's best estimates of potential effects. Please comment on any underlying uncertainties about the proposed changes that would lead to using, or potentially not using, the afforded flexibilities (i.e., cost savings).

X. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to write documents in a clear, concise, and 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 June 10, 1998 (63 FR 31885). The NRC requests comment on this document with respect to the clarity and effectiveness of the language used.

XI. National Environmental Policy Act

A. Introduction

The NRC has prepared this environmental assessment (EA) of the proposed rule amending package certification requirement regulations to determine the significance of the environmental effects of the proposed agency action in accordance with the National Environmental Policy Act of 1969, as amended (NEPA) and NRC's NEPA implementing regulations in 10 CFR part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." As explained below, the NRC has determined that the proposed agency action to modernize NRC's package certification requirement regulations would have no significant effect on the quality of the human environment.

B. Environmental Impacts of the Proposed Agency Action

Proposed rule changes would occur in 10 CFR part 71. Conforming changes would be made to guidance in the future consistent with changes to regulations. Table B-1 lists the sections of the regulations being changed and affected guidance.

Table B-1 Regulations and Guidance Under Consideration in the Modernizing Package Certification Requirements Rulemaking

Regulations	Guidance
§§ 71.1, 71.4, 71.5, 71.17, 71.41, 71.45, 71.47, 71.95	NUREG-1520, NUREG-2215, NUREG-2216

Conforming changes are administrative actions with no physical environmental effect and provide for the appropriate administrative and regulatory framework for package certification under 10 CFR. An example would be adding a reference to a newly created subsection in an existing regulation. All proposed amendments to NRC regulations in this proposed rule occur within the affected regulation.

B.1 Rule Amendments Addressed Under Categorical Exclusion

Categorical exclusions provide a mechanism to identify Federal actions that normally do not have a significant environmental effect on the human environment and for which neither an EA nor environmental impact statement is normally required. This ensures that resources are not expended on the environmental analysis of proposed actions that do not present the potential for significant environmental effects. The NRC has determined that some of the changes to the regulations identified in this proposed rule meet criteria under § 51.22, “Categorical exclusions.” These proposed rule amendments belong to categories of actions which the Commission, by rule or regulation, has declared to be a categorical exclusion, after first finding that the category of actions within the category do not individually or cumulatively have a significant effect on the human environment. In reviewing the list of regulations in Table B-1, the NRC staff have determined that several of the rule amendments are actions eligible for categorical exclusion examples under §§ 51.22(a)(1).

Rule amendments with applicable categorical exclusions are presented in Table B-2 below and no further NEPA analysis is required.

The following rulemaking actions meet the criterion for categorical exclusion under §§ 51.22(c)(2) or 51.22(c)(3):

Table B-2 Rule Amendments Covered by Categorical Exclusion

Rule Amendments	Categorical Exclusion	Reason
§§ 71.1; 71.17; 71.95	§ 51.22(a)(1)	Actions that are administrative, procedural, or solely financial in nature, including, for example (ii): Issuance of or changes to recordkeeping or reporting requirements. Amendments comprise reporting requirements, such as edits intended to allow for electronic submission.
§§ 71.4	§ 51.22(a)(1)	Example (vi): Amendments are corrective or of a minor or nonpolicy nature and do not substantially modify existing regulations. Clarifications include removing the definition of “spent nuclear fuel or spent fuel” because the terms are not used in 10 CFR part 71.

B.2 Rule Amendments Requiring Environmental Assessment

The NRC also evaluated rule amendments that have the potential to affect the human environment and determined that the proposed agency action (rulemaking) would not have a significant environmental effect. These rule amendments would clarify NRC regulations, would continue to provide reasonable assurance of adequate protection of public health and safety, and would result in no new or different environmental effects. The following table presents the basis for why these proposed rule amendments would have no significant environmental effects.

Table B-3 Basis for No Significant Environmental Effects Determination for Rule Amendments Not Covered by a Categorical Exclusion

Rule Amendments	Basis for No Significant Environmental Effects
§ 71.5 Transportation of licensed material	Amendment would add 49 CFR part 385 to the list of DOT regulations in §§ 71.5(a) and 71.5(a)(2)(iv), that licensees are required to comply with, as applicable. This is consistent with current practice and is aligned with the proposed new requirements in § 71.47(b)(3), which would require licensees to coordinate with inspection authorities before shipment of certain Type B packages, such as irradiated microreactors, that are classified as an HRCQ of radioactive material for transport. This amendment would have an equivalent level of public health, safety and security as current NRC regulations and would not result in any physical changes in the environment. Therefore, the NRC has determined that the proposed agency rulemaking action would result in no significant effects to the human environment.
§ 71.41 Demonstration of compliance	Amendments would provide licensees with the option to use alternative methods of demonstration, such as using a risk-informed methodology, to demonstrate compliance with certain NRC transportation requirements for package certification. The alternative method would have to be submitted for review in accordance with § 71.1(a), demonstrate adequate safety during transport, and be acceptable to the Commission, as is currently required for the existing methods. Therefore, this amendment has an equivalent level of safety and security as current NRC regulations and would not result in any physical changes in the environment. Therefore, the NRC has determined that the proposed agency rulemaking action would result in no significant effects to the human environment.
§ 71.45 Lifting and tie-down standards	Amendments to § 71.45(b)(1) would replace existing NRC requirements with international tie-down standards. These requirements provide a level of safety equivalent to the current NRC requirements. These requirements essentially serve a defense in depth function as the package itself, and not the lifting and tie-down standards, provides adequate protection against radiological release, including during accidents. Therefore, this amendment would not result in any physical changes in the environment and thus the proposed agency action would not result in significant effects to the human environment
§ 71.47 External radiation standards for all packages	Amendment to § 71.47(b)(3) would establish new radiation level limits for approval of certain Type B packages, including transportable microreactors, under normal transportation conditions under § 71.71. The NRC staff determined that a 0.5 mSv/h (50

Rule Amendments	Basis for No Significant Environmental Effects
	mrem/h) dose limit at 2 m from the vehicle, with established measures and controls, would result in public doses from these vehicles as single events well within the annual 10 CFR part 20 public dose limit. Packages approved under this amendment would be subject to transportation requirements (e.g., those applicable to HRCQs) which may be credited for reducing radiation risk that Type B packages might pose to the public during normal transportation. In addition, licensees would be required to coordinate with the appropriate inspection authorities to ensure they, and their inspection personnel, are informed of the shipment and any controls necessary to conduct inspections (e.g., dosimetry). This amendment has an equivalent level of public health, safety and security as current NRC regulations and would not result in any physical changes in the environment. Therefore, the NRC has determined that the proposed agency rulemaking action would result in no significant environmental effects.

These proposed rule amendments would modernize existing NRC regulations while ensuring the continued safe, effective, and efficient package certification to provide reasonable assurance of adequate protection of public health and safety and the environment. Table B-3 notes that any of the changes to the 10 CFR part 71 regulations must still provide reasonable assurance of adequate protection of public health and safety. Therefore, the proposed amendments would have no significantly different environmental effects than those resulting from the current regulatory framework.

C. Summary of the Environmental Impacts of the Proposed Agency Action

Implementation of the proposed rule would result in no physical changes to the environment, and, therefore, the NRC has determined that this proposed agency action will not have a significant effect on the quality of the human environment. Proposed rule amendments are administrative in application, involve matters of procedure, clarify reporting requirements, and would provide an equivalent level of safety and security as current NRC regulations.

Since no physical changes would occur in the human environment, the proposed agency action (rulemaking) would not affect any threatened or endangered species or historic properties. Accordingly, the NRC finds that the proposed rulemaking would have no significant environmental impact.

D. Environmental Impacts of the Alternative to the Proposed Agency Action

Under the no action alternative (i.e., the status quo), NRC regulations would remain unchanged. As stated in section B of this EA, the proposed rule would not have a significant effect on the quality of the human environment. Therefore, the no action alternative and the proposed agency action (i.e., proposed rulemaking) would have the same environmental effect, although there would be costs attributable to reviewing the environmental effects of exemption and license amendment requests under the no action alternative. Licensees would continue to comply with existing NRC regulations or request regulatory relief (exemption) from the regulations. The NRC would continue to evaluate the environmental effects of exemption and license amendment requests. The averted costs (benefits) of the rulemaking would not occur. The regulatory analysis for the proposed rule provides information about the costs and benefits of the no action alternative and the proposed agency action. The information can be found in Section VI of this document, "Regulatory Analysis."

E. Agencies and Persons Consulted

The NRC is requesting public comments on this draft EA and Finding of No Significant Impact (FONSI). The NRC will consider public comments in the development of the final rule, EA, and FONSI. The NRC will issue the EA and FONSI when it publishes the final rule. In addition, the NRC consulted with the DOT on the proposed language in § 71.47(b)(3) for certain Type B packages with higher radiation level.

As discussed in Section XI.B, the proposed rule provisions would not have a significant effect on the quality of the human environment. For this reason, the proposed

rulemaking would not impact threatened or endangered species or critical habitat, and the NRC has determined that section 7 consultation under the Endangered Species Act of 1973, as amended, is not necessary. The proposed regulatory changes do not involve any ground disturbing activities or visual effects that would adversely affect historic properties. Therefore, the NRC has determined that consultation is not required under section 106 of the National Historic Preservation Act of 1966, as amended.

F. Draft Finding of No Significant Impact

The NRC has prepared this EA to determine the environmental effects of the proposed agency action (rulemaking). Proposed rule amendments are primarily administrative or procedural in nature and thus would not have any physical environmental effect. As explained in the EA, the NRC has determined the proposed rulemaking would continue to provide reasonable assurance of adequate protection of public health and safety and would result in no new or different environmental effects. Therefore, the NRC concludes that the proposed regulatory changes would not have a significant effect on the quality of the human environment. Based on this conclusion, the NRC has determined there is no need to prepare an environmental impact statement. Accordingly, the NRC finds the proposed agency action would have no significant environmental impact.

XII. Paperwork Reduction Act

This proposed rule contains new or amended collections of information subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). This proposed rule has been submitted to the Office of Management and Budget for review and approval of the information collections.

Type of submission: New

The title of the information collection: Modernizing Package Certification Requirements

OMB approval numbers: 3150-0008

The form number if applicable: Not applicable.

How often the collection is required or requested: On occasion. A third-party notification is required each time a qualifying Type B package is shipped, while the alternative compliance documentation is submitted each time an applicant seeks NRC certification for a package using the optional risk-informed methodology.

Who will be required or asked to respond: Licensees and applicants who transport qualifying Type B packages or seek NRC certification of transportation packages using the optional risk-informed methodology.

An estimate of the number of annual responses: 0.

The estimated number of annual respondents: 0. No respondents are anticipated during the clearance period.

An estimate of the total number of hours needed annually to comply with the information collection requirement or request: 0.

Abstract: The proposed rule would amend 10 CFR part 71 to make two changes to information collection requirements. First, the proposed rule would require licensees

transporting certain Type B packages to coordinate in advance with Federal, State, or local inspection authorities. Second, the proposed rule would provide an optional framework for applicants to demonstrate transportation package safety using risk-informed or alternative methodologies, allowing submission of supporting documentation to the NRC in lieu of meeting specific physical testing requirements.

The NRC is seeking public comment on the potential impact of the information collections contained in this proposed rule and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?

Please explain your response.

2. Is the estimate of the burden of the proposed information collection accurate?

Please explain your response.

3. Is there a way to enhance the quality, utility, and clarity of the information to be collected? Please explain your response.

4. How can the burden of the proposed information collection on respondents be minimized, including the use of automated collection techniques or other forms of information technology?

A copy of the Office of Management and Budget (OMB) clearance package and proposed rule are available in the “Availability of Documents” section of this document or may be viewed free of charge by contacting the NRC’s Public Document Room reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. You may obtain information and comment on submissions related to the OMB clearance package by searching on <https://www.regulations.gov> under Docket ID NRC-2025-1667.

You may submit comments on any aspect of these proposed information collection(s), including suggestions for reducing the burden and on the above issues, by the following methods:

- **Federal rulemaking website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2025-1667.

Submit comments by **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]**.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

XIII. Executive Orders

The following are Executive orders that are related to this proposed rule:

A. Executive Order 12866: Regulatory Planning and Review (as amended by Executive Order 14215, Ensuring Accountability for All Agencies)

The Office of Information and Regulatory Affairs (OIRA) has determined that this proposed rule is a significant regulatory action. Accordingly, the NRC submitted this proposed rule to OIRA for review. The NRC is required to conduct an economic analysis in accordance with section 6(a)(3)(B) of E.O. 12866. More can be found in Section VI of this document, “Regulatory Analysis.”

B. Executive Order 14154: Unleashing American Energy

The NRC has examined this proposed rule and has determined that it is consistent with the policies and directives outlined in E.O. 14154.

C. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is tentatively determined to be a deregulatory action. This proposed rule is a deregulatory action as defined by E.O. 14192. Details on the estimated costs of this proposed rule can be found in Section VI of this document, “Regulatory Analysis.”

D. Executive Order 14270: Zero-Based Regulatory Budgeting to Unleash American Energy

E.O. 14270, “Zero-Based Regulatory Budgeting to Unleash American Energy,” requires the NRC to insert a conditional sunset date into all new or amended NRC regulations provided the regulations are (1) promulgated under the Atomic Energy Act of 1954, as amended (AEA), the Energy Reorganization Act of 1974, as amended (ERA), or the Nuclear Waste Policy Act of 1982, as amended (NWPA); (2) not statutorily required; or (3) not part of the NRC’s permitting regime. The NRC determined that the regulatory changes proposed in this rule are required because they are necessary for providing reasonable assurance of adequate protection of public health and safety and common defense and security, and would be part of NRC’s permitting regime as they apply to package certification requirements. Therefore, the NRC views this rulemaking to be outside the scope of E.O. 14270 and did not insert conditional sunset dates for the regulatory changes in this proposed rule.

E. Executive Order 14294: Fighting Overcriminalization in Federal Regulations

This proposed rule includes Federal regulations that, if adopted, would be enforceable by criminal penalty, as authorized by Section 223 of the Atomic Energy Act of 1954, as amended (AEA). Therefore, per Executive Order 14294, those regulations constitute “criminal regulatory offenses.”

For the purposes of Section 223 of the AEA, the NRC is issuing this proposed rule that would amend 10 CFR part 71 under one or more of Sections 161b, 161i, or 161o of the AEA, except as noted in § 71.100(b). The applicability of criminal penalties

to regulations in part 71 is set forth in § 71.100. Willful violations of the 10 CFR part 71 regulations, other than those listed in § 71.100(b), would be subject to criminal enforcement.

XIV. Coordination with NRC Agreement States

On September 3, 2025, the NRC held a government-to-government meeting with the Agreement States regarding E.O. 14300. In this meeting, the NRC presented its goals and objectives for future rulemakings to be done in response to the E.O. At the time of the meeting, the proposed rule text was not available. On January 29, 2026, the rule was shared with the Standing Committee for Compatibility.

XV. Compatibility of Agreement State Regulations

On the basis of the “Agreement State Program Policy Statement” approved by the Commission on October 2, 2017, and published in the *Federal Register* (82 FR 48535; October 18, 2017), NRC program elements can be placed into six categories (A, B, C, D, NRC, or health and safety (H&S)) to form the basis for evaluating and classifying the program elements. Under the Policy Statement, a program element means any component or function of a radiation control regulatory program, including regulations and other legally binding requirements imposed on regulated persons, which contributes to implementation of that program. This proposed rule only modifies regulations that are of Compatibility Categories B, D, and NRC.

Compatibility Category B pertains to a limited number of program elements that cross jurisdictional boundaries and should be addressed to ensure uniformity of regulation on a nationwide basis. For Compatibility Category B, the Agreement State program element shall be essentially identical to that of NRC.

Compatibility Category D are those program elements that do not meet any of the criteria of Category A, B, or C, and are not required to be adopted by Agreement States for purposes of compatibility. An Agreement State has the flexibility to adopt and implement program elements within the State's jurisdiction that are not addressed by the NRC or that are not required for compatibility. However, such program elements of an Agreement State relating to agreement material shall (1) not create conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis; (2) not preclude a practice authorized by the AEA and in the national interest; and (3) not preclude the ability of the NRC to evaluate the effectiveness of Agreement State programs for agreement material with respect to protection of public health and safety and the environment.

Compatibility Category NRC are those program elements that address areas of regulation that cannot be relinquished to the Agreement States under the AEA, or provisions of 10 CFR. The NRC maintains regulatory authority over these program elements and the Agreement States must not adopt these NRC program elements. However, an Agreement State may inform its licensees of these NRC requirements through a mechanism under the State's administrative procedure laws, as long as the State adopts these provisions solely for the purposes of notification, and does not exercise any regulatory authority as a result.

The proposed rule is a matter of compatibility between the NRC and the Agreement States, thereby providing consistency among Agreement State and NRC requirements. The compatibility (A, B, C, D, and NRC) and adequacy (H&S) categories are designated in the following table:

Adequacy and Compatibility Table

Section	Change	Subject	Adequacy or Compatibility	
			Existing	New

71.1(a)	Amend	Communications and Records	D	NRC – for “demonstrations of alternative package evaluations” D – remaining provisions
71.4	Remove	Definitions – Spent Nuclear Fuel	D	-
71.5	Amend	Transportation of licensed material	[B]	[B]
71.17	Amend	General license: NRC-approved package	B	B
71.41(e)	New	Demonstration of compliance	-	NRC
71.45	Amend	Lifting and tie-down standards for all packages	NRC	NRC
71.47(b)(3)	Amend	External radiation standards for all packages	-	NRC
71.47(a), (b), & (d)	Amend	External radiation standards for all packages	[B]	NRC
71.95	Amend	Reports	D	C

XVI. Availability of Guidance

Due to the accelerated schedule for this rulemaking, the NRC is not issuing draft guidance for implementation of the proposed requirements at this time.

XVII. Public Meeting

The NRC will conduct a public meeting on the proposed rule for the purpose of providing stakeholders with the opportunity to ask questions and seek clarification from the NRC staff on the proposed rule.

The NRC will publish a notice of the location, time, and agenda of the meeting in the *Federal Register*, on Regulations.gov, and on the NRC’s public meeting website within at least 10 calendar days before the meeting. Stakeholders should monitor the NRC’s public meeting website for information about the public meeting at:
<https://www.nrc.gov/public-involve/public-meetings/index.cfm>.

XVIII. Availability of Documents

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

Document	ADAMS Accession No. / Web link / <i>Federal Register Citation</i>
SECY-24-0062, "Risk-Informed Methodology for a Future Transportable Triso-Based Micro-Reactor Package Application," July 22, 2024	ML23320A124 (Package)
Memorandum of Understanding; Transportation of Radioactive Materials, July 2, 1979	44 FR 38690
OMB Supporting Statement, "Supporting Statement for Information Collections Contained in Modernizing Package Certification Requirements Proposed Rule," [INSERT DATE]	ML26022A034
PNNL-38760, "Microreactor Incident Free Transportation Radiation Dose Assessment," December 2025	ML26061A014
Revision to Policy Statement, "Agreement State Program Policy Statement," October 18, 2017	82 FR 48535
Executive Order 12866, "Regulatory Planning and Review," October 4, 1993	58 FR 51735
Executive Order 14154, "Unleashing American Energy," January 29, 2025	90 FR 8353
Executive Order 14192, "Unleashing Prosperity Through Deregulation," February 6, 2025	90 FR 9065
Executive Order 14215, "Ensuring Accountability for All Agencies," February 24, 2025	90 FR 10447
Executive Order 14270, "Zero-Based Regulatory Budgeting to Unleash American Energy," April 15, 2025	90 FR 15643
Executive Order 14294, "Fighting Overcriminalization in Federal Regulations," May 14, 2025	90 FR 20363
Executive Order 14300, "Ordering the Reform of the Nuclear Regulatory Commission," May 29, 2025	90 FR 22587
Presidential Memorandum, "Plain Language in Government Writing," June 10, 1998	63 FR 31885

The NRC may post materials related to this document, including public comments, on the Federal rulemaking website at <https://www.regulations.gov> under Docket ID NRC-2025-1667. In addition, the Federal rulemaking website allows members of the public to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (NRC-2025-1667); 2) click the “Subscribe” button; and 3) enter an email address and click on the “Subscribe” button.

List of Subjects in 10 CFR Part 71

Criminal penalties, Hazardous materials transportation, Intergovernmental relations, Nuclear materials, Packaging and containers, Penalties, Radioactive materials, Reporting and recordkeeping requirements.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553, the NRC is proposing to amend 10 CFR part 71.

PART 71 - PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

1. The authority citation for part 71 continues to read as follows:

Authority: Atomic Energy Act secs. 53, 57, 62, 63, 81, 161, 182, 183, 223, 234, 1701 (42 U.S.C. 2073, 2077, 2092, 2093, 2111, 2201, 2232, 2233, 2273, 2282, 2297f); Energy Reorganization Act secs. 201, 202, 206, 211 (42 U.S.C. 5841, 5842, 5846, 5851); Nuclear Waste Policy Act sec. 180 (42 U.S.C. 10175); Government Paperwork Elimination Act sec. 1704 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).

Section 71.97 also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789-790.

2. In § 71.1, revise paragraph (a) to read as follows:

§ 71.1 Communications and Records.

(a) Except where otherwise specified, all communications, demonstrations of alternative package evaluations, and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed: ATTN: Document Control Desk, Director, Division of Fuel Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, 20852; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's website at <http://www.nrc.gov/site-help/e-submittals.html>; by e-mail to MSHD.Resource@nrc.gov; or by writing the Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the submission date falls on a Saturday, Sunday, or a Federal holiday, the next Federal working day becomes the official due date.

* * * * *

§ 71.4 [Amended]

3. In § 71.4, remove the definition to *Spent nuclear fuel or Spent Fuel*.

§ 71.5 [Amended]

4. In § 71.5:

- a. In paragraph (a), remove the phrase “shall” and add in its place the phrase “must”, and add the phrase “385,” after the phrase “171 through 180,”;

b. In paragraph (a)(1), remove the phrase “shall” and add in its place the phrase “must”; and

c. In paragraph (a)(2), remove the phrase “shall” and add in its place the phrase “must”.

d. In paragraph (a)(2)(iv), and add the phrase “,385” after the phrase “part 177”.

5. In § 71.17, in paragraph (c) introductory text remove the phrase “shall” and add in its place the phrase “must” and revise paragraph (c)(3) to read as follows:

§ 71.17 General license: NRC-approved package.

* * * * *

(c) * * *

(3) Submit using an appropriate method listed in § 71.1(a), the licensee's name and license number and the package identification number specified in the package approval before the first use of the package to: ATTN: Document Control Desk, Division of Fuel Management, Office of Nuclear Material Safety and Safeguards.

* * * * *

6. In § 71.41, add new paragraph (e) to read as follows:

§ 71.41 Demonstration of compliance.

* * * * *

(e) In accordance with paragraphs (a) and (c) of this section, in lieu of an evaluation of the effects on a package of the tests specified in § 71.71 (“Normal conditions of transport”), and the tests specified in § 71.73 (“Hypothetical accident conditions”), and § 71.61 (“Special requirements for Type B packages containing more than $10^5 A_2$ ”), another method of demonstration may be used to evaluate a package for certification if the method of demonstration has been submitted for review in accordance

with § 71.1(a) before the submission of an application for a certificate of compliance, provides adequate safety during transport, and is acceptable to the Commission.

7. In § 71.45, revise paragraph (b)(1) to read as follows:

§ 71.45 Lifting and tie-down standards for all packages.

* * * * *

(b) * * *

(1) If there is a system of tie-down devices that is a structural part of the package, the system must be capable of withstanding, without generating stress in any material of the package in excess of its yield strength, a static force applied to the center of gravity of the package having a vertical component of 2 times or, for air transportation, 2.5 times the weight of the package with its contents; a horizontal component along the direction in which the vehicle travels of 5 times the weight of the package with its contents; and a horizontal component in the transverse direction of 1.3 times the weight of the package with its contents.

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8. In § 71.47, revise paragraph (b)(3) to read as follows:

§ 71.47 External radiation standards for all packages.

* * * * *

(b) * * *

(3) 0.1 mSv/h (10 mrem/h) at any point 2 meters (80 in) from the outer lateral surfaces of the vehicle (excluding the top and underside of the vehicle); or in the case of a flat-bed style vehicle, at any point 2 meters (6.6 feet) from the vertical planes projected by the outer edges of the vehicle (excluding the top and underside of the vehicle). These

radiation standards apply unless the following conditions are met, in which case the limit is 0.5 mSv/h (50 mrem/h):

(i) The package contents meet the definition of highway route controlled quantity specified in 49 CFR 173.403; and

(ii) The licensee coordinates 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. Such coordination must ensure that inspection personnel are informed of the radiological conditions and of any applicable controls needed to support inspection activities, including appropriate radiation dosimetry; and

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9. In § 71.95:

a. In paragraphs (a) and (b) remove the phrase “written”; and

b. Revise paragraph (c) introductory text to read as follows:

§ 71.95 Reports.

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(c) Each licensee must submit, in accordance with § 71.1, a report required by paragraph (a) or (b) of this section within 60 days of the event or discovery of the event. The licensee must also provide an electronic copy of each report submitted to the NRC to the applicable certificate holder. Reports prepared under other regulations may be submitted to fulfill this requirement if the reports contain all the necessary information, and the appropriate distribution is made. Using an appropriate method listed in § 71.1(a), the licensee must report to: ATTN: Document Control Desk, Division of Fuel Management, Office of Nuclear Material Safety and Safeguards. These reports must include the following:

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Dated: Month XX, 2026.

For the Nuclear Regulatory Commission.

Jody Martin,
Secretary of the Commission.