
Draft Environmental Assessment for the Proposed Rule—Harmonization of Transportation Safety Requirements with International Atomic Energy Agency Standards

U.S. Nuclear Regulatory Commission
Office of Nuclear Materials Safety and Safeguards

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ABBREVIATIONS AND ACRONYMS

CFR	<i>Code of Federal Regulations</i>
DOT	U.S. Department of Transportation
EA	environmental assessment
FONSI	finding of no significant impact
FR	<i>Federal Register</i>
IAEA	International Atomic Energy Agency
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
SSR	Specific Safety Requirements

1 INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC), in consultation with the U.S. Department of Transportation (DOT), is proposing to amend its regulations for the packaging and transportation of radioactive material in 10 CFR Part 71, “Packaging and Transportation of Radioactive Material.” The NRC has historically revised its transportation safety regulations to ensure harmonization with the International Atomic Energy Agency (IAEA) standards. These changes are necessary to maintain a consistent regulatory framework with the DOT for the domestic packaging and transportation of radioactive material and to ensure general accord with IAEA standards. This proposed rule would also revise 10 CFR Part 71 to include administrative, editorial, or clarification changes, including changes to certain Agreement State compatibility category designations.

The NRC has prepared this environmental assessment (EA) in compliance with the NRC’s environmental protection regulations in 10 CFR Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” which implement the National Environmental Policy Act of 1969, as amended (NEPA).

1.1 Background

On June 12, 2015, the NRC, in consultation with the DOT, published a final rule that amended the NRC’s regulations for the packaging and transportation of radioactive material in 10 CFR Part 71 (NRC, 2015). These amendments made conforming changes to the NRC’s regulations based on the regulations of the IAEA. That final rule, in combination with a DOT final rule (DOT, 2014) amending 49 CFR, brought U.S. regulations into general accord with the 2009 edition of the IAEA’s “Regulations for the Safe Transport of Radioactive Material” (TS-R-1) (IAEA, 2009). The IAEA has since updated its regulations for the transport of radioactive material in SSR-6, 2012 and 2018 editions. In the NRC’s 2015 harmonization rulemaking, the Commission stated that the NRC will consider any necessary changes related to SSR-6 in a future rulemaking after consulting with DOT.

In SECY-16-0093, dated July 28, 2016, the NRC staff requested Commission approval to initiate a rulemaking related to harmonizing 10 CFR Part 71 with IAEA standards and DOT regulations (NRC, 2016a). The Commission approved the NRC staff recommendation via a staff requirements memorandum, SRM-SECY-16-0093, dated August 19, 2016 (NRC, 2016b).

The IAEA is authorized to establish safety standards to protect public health and safety and to minimize the danger to life and property. The IAEA has developed international safety standards for the safe transport of radioactive material. The IAEA safety standards and regulations are developed in consultation with the competent authorities of Member States, so they reflect an international consensus on regulatory requirements. By providing a global framework for the consistent regulation of the transport of radioactive material, IAEA safety standards facilitate international commerce and contribute to the safe conduct of international trade involving that material. By periodically revising its regulations to be compatible with IAEA standards and DOT regulations, the NRC can remove inconsistencies that could impede international commerce.

The roles of the DOT and the NRC in the co-regulation of the transportation of radioactive materials are documented in a Memorandum of Understanding (NRC, 1979). Because they co-regulate transportation of radioactive materials in the United States, the NRC and the DOT have historically coordinated to harmonize their respective regulations to the IAEA revisions.

The NRC staff has engaged with the DOT staff in this rulemaking to identify and evaluate gaps between 10 CFR Part 71 regulations and the updated IAEA standards in SSR-6 (2018 Edition), which would be closed by the current rulemaking. The DOT is undertaking a similar initiative to harmonize its regulations for the transportation of radioactive material in 49 CFR Parts 107 and 171-180 with the 2018 Edition of SSR-6.

The NRC reviewed the 2018 Edition of SSR-6 and identified 10 regulatory issues for harmonization with IAEA and another 5 NRC-initiated recommended changes to 10 CFR Part 71 to be evaluated during the rulemaking development process. Fourteen of these issues were documented in the issues paper (NRC, 2016c). Besides the harmonization issues, the issues paper included consideration of administrative and editorial changes to clarify the regulations.

1.2 Proposed Action

The proposed action is a rulemaking to update the NRC's regulations related to the packaging and transportation of radioactive materials. The NRC is proposing to amend its regulations in 10 CFR Part 71 to make them more consistent or compatible with the IAEA international transportation standard No. SSR-6 (2018 Edition). These revisions are being coordinated with proposed DOT hazardous materials regulations in order to maintain a consistent framework for the domestic and international transportation and packaging of radioactive material.

This proposed rule would also revise 10 CFR Part 71 to include administrative, editorial, or clarification changes, including changes to the compatibility category designations for certain requirements for Agreement States.

1.3 Purpose of, and Need for, Proposed Action

As discussed previously, by providing a global framework for the consistent regulation of the transport of radioactive material, IAEA safety standards facilitate international commerce and contribute to the safe conduct of international trade involving that material. The NRC is able to remove inconsistencies that could impede international commerce by periodically revising its regulations to be compatible with IAEA standards and DOT regulations.

The NRC is proposing to amend its regulations to ensure general accord with the IAEA international transportation standard No. SSR-6 (2018 Edition). In SRM-SECY-16-0093, the Commission approved the NRC staff recommendation to initiate a rulemaking related to the harmonization of 10 CFR Part 71 with the IAEA standards and DOT regulations (NRC, 2016b).

2 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

The NRC reviewed the updated IAEA standards and identified regulatory issues and other recommended changes to 10 CFR Part 71 to be analyzed during the rulemaking development process. In addition to the IAEA harmonization issues, the NRC has also identified administrative and editorial changes to clarify the regulations.

The proposed rule includes some actions that are of the types described in § 51.22(c). The NRC has previously determined that these types of actions do not have a significant impact on the environment and has categorically excluded them from the requirement to prepare an environmental analysis. Specifically, the NRC has determined that some amendments in this proposed rule are the types of actions described in the § 51.22(c) exclusions noted in Table 1.

Accordingly, the NRC has not developed an environmental impact statement or an EA for these portions of the proposed rule.

Table 1 – Application of 10 CFR 51.22 Categorical Exclusions to the Proposed Requirements

Regulatory Criterion	Regulation Title	Proposed Regulatory Change	Applicable 10 CFR 51.22 paragraph
§ 71.0	Purpose and Scope	Revise § 71.0(d)(1) to reflect proposed changes in § 71.22 and § 71.23.	(c)(2)
§ 71.4	Definitions (“Low Specific Activity (LSA) material”)	Change “excepted” to “exempted”.	(c)(2)
§ 71.4	Definitions (“Radiation level”)	Add definition for “Radiation level”.	(c)(2)
§ 71.15	Exemption from Classification as Fissile Material	Editorial change to § 71.15(d) and to add reference to § 71.15(g) .	(c)(2)
§ 71.95	Reports	Remove duplicate requirement found in § 71.95(b).	(c)(2)
§ 71.97	Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste	Remove reference to “irradiated reactor fuel” and thereby remove duplicative reporting requirement with 10 CFR Parts 37 and 73.	(c)(2)
§ 71.100	Criminal Penalties	Remove § 71.77 from § 71.100(b).	(c)(2)
§ 71.106(b)	Changes to Quality Assurance Program	Add requirement to submit quality assurance program updates biennially if no changes are made.	(c)(3)(iii)
Appendix A to Part 71	Determination of A ₁ and A ₂	Add seven radionuclides and make editorial changes.	(c)(2)

The remaining regulatory issues and other recommended changes to 10 CFR Part 71 to be analyzed during the rulemaking development process (i.e., the IAEA harmonization issues and the NRC-identified administrative and editorial changes) require the NRC to prepare an EA to address the potential associated environmental impacts. The following sections discuss each of these topics and the potential environmental impacts.

2.1 Definitions

The proposed rule would modify the definitions in § 71.4 for: (1) “Low Specific Activity (LSA) material”; (2) “Special form radioactive material”; and (3) “Surface Contaminated Object (SCO).” The definition for “Low Specific Activity (LSA) material” would be changed by removing the requirement for a leaching test for materials categorized as LSA-III. The definition of “Special form radioactive material” would be revised to harmonize 10 CFR Part 71 with the transitional arrangements in IAEA’s SSR-6 (2018 Edition) concerning the approval of package designs for

domestic transport. Under the definition of “Surface Contaminated Object (SCO),” new provisions would be added for large solid contaminated objects under a new SCO category termed “SCO-III,” to harmonize with the IAEA transportation standards.

“Low Specific Activity (LSA) material”

The definition for “Low Specific Activity (LSA) material” in § 71.4 includes LSA-I, LSA-II, and LSA-III. Radioactive material, low specific activity category III (i.e., LSA-III) includes solids, excluding powders, that meet the requirements in § 71.77, “Qualification of LSA-III Material” and which have an estimated average specific activity limit that does not exceed $2 \times 10^3 A_2/g$ as determined in appendix A to 10 CFR part 71 per gram (A_2/g). The qualification tests in § 71.77 include a leaching test requirement with immersion of the specimen material for 7 days. The IAEA eliminated the LSA-III leaching test in SSR-6, 2018 edition, from paragraphs 409, 601, and 701. Consequently, the NRC is proposing corresponding revisions to §§ 71.4 and 71.77 to remove reference to and requirements for the leaching test, and relatedly, removes from § 71.100(b) the reference to § 71.77.

The removal of the leaching test requirement from the definition of “LSA—III Solids” makes the definition consistent with IAEA’s standards (SSR-6, 2018 Edition). The NRC determined that requiring the LSA-III leaching test is not necessary, since the test does not increase the safety of the material during transport and the test does not decrease the inhalation pathway exposure when compared to LSA-II material in powder form. As a result, removal of the leaching test requirement from the definition of “LSA—III Solids” would not change the type or intensity of any environmental impacts from those currently experienced.

“Special form radioactive material”

Historically, IAEA standards, and DOT and NRC regulations, have included transitional arrangements or "grandfathering" provisions whenever the regulations have undergone revision. The purpose is to minimize the costs and impacts of implementing changes in the regulations, since package designs compliant with the existing regulations do not become "unsafe" when the regulations are revised (unless a significant safety issue is corrected in the revision).

Typically, the transitional arrangements include provisions that allow for: (1) continued use of existing package designs and packagings already fabricated; and completion of packagings in the process of being fabricated, although some restrictions on fabrication of packages approved to earlier editions of the regulations may be imposed; (2) restrictions on modifications to package designs without the need to demonstrate full compliance with the revised regulations; (3) changes in packaging identification numbers; and (4) limitations on the continued use of special form sources approved to earlier versions of the regulations.

In the proposed rule, the NRC would allow continued use of special form radioactive material that was approved to the regulations in effect from April 1, 1996, to September 30, 2004, provided that fabrication of the special form encapsulation was successfully completed by the effective date of the rulemaking and special form material approved to the regulations in effect from October 1, 2004, to the effective date of this rulemaking, provided that the special form encapsulation is fabricated on or before December 31, 2025. In doing so, the NRC seeks to align with the definition of “special form radioactive material” that the DOT will adopt as part of their harmonization rulemaking since the DOT is the lead for certifying special form sources. These transitional arrangements would not change the type or intensity of any environmental impacts from those currently experienced.

“Surface Contaminated Object (SCO)”

The NRC is proposing to include a definition for a new category termed “SCO-III” to harmonize NRC’s regulations with DOT’s proposed regulations and the IAEA’s SSR-6 (2018 edition). Presently, most large radioactive objects could be characterized for transportation as one of the two existing SCO categories, either SCO-I or SCO-II, as defined in § 71.4. However, harmonization with SSR-6, 2018 edition, would add the new SCO-III category and the associated definition. The criteria in the proposed SCO-III definition would limit the contamination on the shipped object and be protective of public health and safety and the environment. Therefore, addition of the new SCO-III category would not change the type or intensity of any environmental impacts from those currently experienced.

2.2 Revision of Fissile Exemptions

In 2012, IAEA modified the fissile exception provisions in SSR-6 paragraph 417 to include three new per-package mass limit options, with associated mass limits on the consignment and/or conveyance. The NRC proposes to incorporate SSR-6 paragraph 417(c) into a new provision under § 71.15 for 3.5 grams or less uranium-235, provided the uranium is enriched in uranium-235 to a maximum of 5 percent by weight, and the total plutonium and uranium-233 content does not exceed 1 percent of the mass of uranium-235. The NRC also proposes to incorporate SSR-6 paragraph 417(e), with its associated exclusive use restriction in paragraph 570(e), but with a higher mass limit of 140 grams of fissile material, as an additional fissile exemption under § 71.15(g). The NRC is not proposing to incorporate the associated consignment limit of IAEA SSR-6 paragraph 570(c).

The fissile material exemptions in § 71.15 facilitate the safe transport of low-risk fissile material and allow the shipments to take place without specific NRC approval because safety is ensured under normal conditions of transport and hypothetical accident conditions by the mass or concentration limits in the specific fissile material exemption provisions. The proposed revisions to § 71.15 would provide for the safe transport of additional categories of low-risk fissile material with minimal environmental impact.

2.3 Revision of Transitional Arrangements

The NRC’s transitional arrangements, located in § 71.19, allow for the phase out of older transportation packages, as appropriate, and the continued use of existing package designs and packaging already fabricated, since package designs compliant with existing regulations do not become unsafe when the regulations are amended. Significant safety issues would be addressed with a revision to the regulations, as well as licensee-specific action.

The NRC is harmonizing its regulations with the transitional arrangements in SSR-6, 2018 edition, as follows:

1. Phase out the use of packages approved to NRC regulations in effect prior to April 1, 1996, (i.e., NRC regulations that were harmonized with the IAEA’s SS No. 6, 1973 Edition which includes packages that do not have “-85” or “-96” in the package identification number), 8 years after the effective date of this rulemaking. For continued use beyond this date, these packages would be required to be re-certified to current NRC regulations, removed from service, or used via exemption.

2. Prohibit the use of packages with a “-96” in the package identification number fabricated after December 31, 2028, and, for packages to be used for international shipment after December 31, 2025, require multilateral approval, as defined in 49 CFR 173.403, “Definitions.” Revise § 71.17(e) to state that packages with a “-96” in the package identification number would become previously approved packages and subject to the current § 71.19(c).
3. Revise § 71.19 to limit amendments to package designs that have a “-96” in the package identification number as currently specified in paragraph (c) and revise the current paragraph (d) to state that the NRC will revise the package identification number for packages approved prior to this rule change, after submission of an application showing that the packages meet the requirements in the revised 10 CFR Part 71.
4. Allow for previously approved package designs to be resubmitted to the NRC for review against the current NRC regulations. If the package design described in the resubmitted application meets the current standards, the NRC may issue a new certificate of compliance for that package design without a year designation.

Under the proposed action, the NRC would be phasing out older transportation packages, as appropriate, and authorizing the continued use of existing package designs and packaging already fabricated. These changes would harmonize § 71.19 with the IAEA standards and DOT regulations, thus allowing the continued safe transport of radioactive materials using these packages and package designs with minimal environmental impact.

2.4 Deletion of Type A Package Limitations in Fissile Material General Licenses

The general license criteria in §§ 71.22 and 71.23 are intended, respectively, to allow NRC licensees to ship small quantities of fissile material and special form plutonium in packages that have been assigned a criticality safety index (CSI) to ensure accumulation control for packages on a conveyance. The general licenses in §§ 71.22 and 71.23 are currently limited to Type A quantities of material transported in a Type A package (see § 71.22(a) and (c)(1) and § 71.23(a) and (c)(1)). This restriction to a Type A package is not consistent with the mass limits for some fissile nuclides, and because of these inconsistencies, the NRC has determined that the limitation to a Type A quantity in a Type A package is not consistent with the intent of the general license, and that shipment in a Type B package can be allowed. The NRC proposes to add three new paragraphs in §§ 71.22 (71.22(f), (g), and (h)) and 71.23 (71.23(f), (g), and (h)) and make conforming changes to § 71.0(d)(1) to ensure that the use of Type B packages with the general licenses in either § 71.22 or § 71.23 is consistent with the use under the general license in § 71.17 and NRC’s authorized use of previously approved packages in § 71.19.

Additionally, the NRC proposes to revise § 71.22(e)(4) to limit uranium-233 (²³³U) to less than 1.0 percent of the mass of uranium-235 (²³⁵U) when using Table 71-2 of § 71.22. The calculations used to support the enrichment limit for § 71.15(d), not to exceed 1.0 weight percent enriched uranium, demonstrate that this limit is safe provided the plutonium and ²³³U are limited to less than one percent of the ²³⁵U.

The NRC also proposes to revise the language in § 71.23(a) to clarify that only special form sealed sources, not just sealed sources, may be delivered to a carrier for transport using the general license. The existing rule language refers to “sealed sources.” While all special form sources are sealed sources, not all sealed sources meet the definition of special form material in § 71.4. The requirement in § 71.23 only applies to sealed sources that meet this definition.

Shipping material that meets the mass limits of the general licenses in §§ 71.22 and 71.23 in a Type B package would not invalidate the criticality safety conclusions associated with these mass limits. In fact, the material would be less likely to present a criticality hazard, as Type B packages generally are more robust and have more mass, which would increase neutron absorption, and limit releases under hypothetical accident conditions, which would prevent material from multiple packages from redistributing together under optimum moderation conditions. Therefore, the NRC concludes that the mass limits determined to assure subcriticality in Type A packages under §§ 71.22 and 71.23 will also assure subcriticality in Type B packages. Removing the restriction to ship less than a Type A quantity of material in a Type A package (i.e., allowing shipment of material up to the mass limits in §§ 71.22 and 71.23 in a Type B package) would correct the inconsistencies between the mass limits and package restrictions discussed above. The NRC expects no environmental impacts as a Type A and Type B packaging both provide for safe transport of the contained materials authorized in each package type.

Additionally, the NRC proposal to limit ^{233}U to less than 1.0 percent of the mass of ^{235}U would not affect the criticality safety of quantities of enriched uranium under the general license in § 71.22. This change would support the safe transport of fissile materials under this general license with minimal environmental impacts.

Also, the NRC proposal to clarify that § 71.23 only applies to special form sealed sources would not result in any environmental impacts.

2.5 Inclusion of Evaluation of Aging Mechanisms and a Maintenance Program

Since an evaluation of aging effects and a description of the maintenance program are not specifically required by 10 CFR Part 71, the NRC is proposing to revise § 71.43(d) to include the evaluation of the effects of aging, and add new provisions to subpart D “Application for Package Approval” (at §§ 71.31(a)(3) and 71.35(d)) to add a specific requirement to include a description of the maintenance program in an application for package approval. Making the change to the requirements also would ensure that NRC regulations are consistent with the IAEA’s SSR-6, 2018 Edition.

The maintenance program is meant to assure that the packaging will perform as intended throughout its time in service. The description of the maintenance program should include periodic testing requirements, inspections, and replacement criteria and schedules for replacement, and repairs of components on an as-needed basis, based on the results of the aging evaluation in the application. This would ensure packages do not degrade over their service life and have no environmental impacts.

2.6 Inclusion of Head Space for Liquid Expansion

The NRC is proposing to revise § 71.43 to add a design requirement to ensure adequate ullage (i.e., head space) in a package designed to contain liquids during evaluation of the tests and conditions for normal conditions of transport and hypothetical accident conditions. This revision would ensure consistent regulations between the NRC and the DOT and with the IAEA standards for domestic and international transport of packages containing radioactive liquids.

The proposed rule change is a package design requirement to ensure that systems containing liquids are not affected by temperature changes in the environment that the package is subjected to and as such, would not have an environmental impact.

2.7 Revision of Uranium Hexafluoride Package Requirements

The NRC is proposing to revise § 71.55(g)(1) to require that there is no contact between the cylinder plug and any other part of the package, other than at its original attachment point and that the cylinder plug remains leak tight. This change is meant to harmonize NRC regulations with the IAEA standards in SSR-6, 2018 Edition, and ensure consistent regulatory requirements for both the cylinder plug and valve for transport of uranium hexafluoride (UF₆).

In making this change, the NRC would require applicants to demonstrate that, following the tests for hypothetical accident conditions in § 71.73, there is no physical contact between the valve body or the plug and any other component of the packaging, other than at its original point of attachment, and the valve and the plug remain leak tight. This change would not result in environmental impacts in that it would support the continued safe transport of UF₆ in adequately designed and constructed packages.

2.8 Revision of Insolation Requirements for Package Evaluations

The NRC is proposing to change the unit of measure for the values of insolation used for the heat test for normal conditions of transport in § 71.71(c)(1) and to add insolation to the initial conditions for the tests for hypothetical accident conditions in § 71.73(b).

The NRC is proposing to revise the units of insolation for the heat test for normal conditions of transport to match the units used in the 2018 edition of SSR-6. This requires changing the units from grams-calories per square centimeter (g-cal/cm²) to watts per square meter (W/m²).

The NRC is also proposing to revise § 71.73(b) to add insolation as an initial condition to the fire test for hypothetical accident conditions. By doing so, the regulation would be consistent with IAEA's SSR-6, 2018 Edition, and would ensure that the thermal evaluations required by the NRC are the same as those provided in the IAEA standards.

The NRC does not expect environmental impacts from the change in units for the heat test for normal conditions of transport since the solar load on the package is larger and the criteria the package must meet after this evaluation has not changed. Additionally, since the test with insolation is more rigorous and the post-test criteria for the package have not changed, the NRC does not expect environmental impacts this change.

2.9 Deletion of Low Specific Activity-III Leaching Test

The definition for "Low Specific Activity (LSA) material" in § 71.4 includes three different groups: LSA-I, LSA-II, and LSA-III. Radioactive material in the LSA-III group includes solids, excluding powders, that meet the requirements in § 71.77, "Qualification of LSA-III Material" and which have an estimated average specific activity limit that does not exceed $2 \times 10^{-3}A_2/g$ as determined in appendix A to 10 CFR part 71 per gram (A_2/g). The qualification tests in § 71.77 includes a leaching test requirement with immersion of the specimen material for 7 days. The IAEA eliminated the LSA-III leaching test in SSR-6, 2018 Edition, from paragraphs 409, 601, and 701. Consequently, the NRC is proposing to remove the leaching test requirement in § 71.77 and make conforming changes to §§ 71.4 and 71.100, which both reference § 71.77.

The NRC has determined that requiring the LSA-III leaching test is not necessary, as the test does not increase the safety of the material during transport, and the test does not decrease the inhalation pathway exposure when compared to LSA-II material in powder form. The limitations of the average specific activities to $10^{-4}A_2/g$ for LSA-II, and $2 \times 10^{-3}A_2/g$ for LSA-III material and

the exclusion of powder from the LSA-III definition collectively ensure that the effective dose criterion of the IAEA's transport standards is met. The derivation of the LSA-II and LSA-III quantity limits is based on maintaining the dose criterion of 50 mSv to persons in the vicinity of a severe transport accident.

An international working group concluded that the then-currently required leaching test for LSA-III material did not contribute to the 50 mSv effective dose transport safety limit. The NRC, therefore, does not expect environmental impacts from removing this requirement from 10 CFR Part 71.

2.10 Revision to Agreement State Compatibility Categories

The NRC is proposing to revise the compatibility category designations for the reporting requirements in § 71.95 and also for the regulations containing quality assurance program review criteria for Agreement State review, approval, inspection, and enforcement of those licensees located within their states that use Type B packages for shipping, other than industrial radiography use, or ship using the general license in § 71.21, § 71.22, or § 71.23.

On October 18, 2017, the NRC published a merged revision to the 1997 Policy Statements ("Policy Statement on the Adequacy and Compatibility of Agreement State Program and the Statement of Principles and Policy for the Agreement State Program") (NRC, 1997). The resulting "Agreement State Program Policy Statement" (NRC, 2017) set forth the approach that the Commission will use when determining which of its regulations and program elements should be adopted by an Agreement State to maintain an adequate and compatible program.

The Policy Statement defines “program element” as any component or function of a radiation control regulatory program, including regulations or other legally binding requirements imposed on regulated persons, which contributes to implementation of that program. It identifies those NRC program elements required for adequacy and having a particular health and safety component as those that are designated as Categories A, B, C, D, NRC, and H&S, and those required for compatibility include those regulations and other legally binding requirements designated as Compatibility Categories A, B, C, and D (see the text box for definitions of these compatibility categories).

Even though the change in compatibility category designations of these regulations for the present rulemaking would now require those affected Agreement State Programs to adopt them and would also require the Agreement State licensees to be in compliance with these regulations, the NRC considers that the adoption and implementation of these regulations do not have any potential impact on the environment.

Compatibility Categories & Health and Safety Identification*

- A** = Basic radiation protection standard or related definitions, signs, labels or scientific terms necessary for a common understanding of radiation protection principles. The Agreement State program element should be essentially identical to that of NRC;
- B** = This category 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. The Agreement State program element should be essentially identical to that of NRC;
- C** = Program element, the essential objectives of which should be adopted by the Agreement State to avoid conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis. The manner in which the essential objectives are addressed need not be the same as NRC, provided the essential objectives are met;
- D** = Not required for purposes of compatibility;
- NRC** = These are NRC program elements that address areas of regulation that cannot be relinquished to Agreement States pursuant to the Atomic Energy Act or provisions of 10 CFR regulations. The State should not adopt these program elements;
- H&S** = Program elements identified by H&S in the Comment column are not required for purposes of compatibility; however, they do have particular health and safety significance. The Agreement State should adopt the essential objectives of such program elements to maintain an adequate program.
- []** = A bracket around a category means that the Section may have been adopted elsewhere and it is not necessary to adopt it again.

* *Compatibility Categories and Health and Safety Identification for NRC Regulations and Other Program Elements*, Interim Procedure State Agreement (SA) SA-200 (Section V.B.1.d). (NRC, 2019)

3 ENVIRONMENTAL IMPACTS OF THE ALTERNATIVE TO THE PROPOSED ACTION

The NRC considered the No-Action Alternative. Under this alternative, the NRC would not take the action to revise 10 CFR Part 71, thus leaving in place the current regulations, and the NRC’s regulations would not be harmonized domestically with DOT regulations or internationally with IAEA standards. The NRC considers that there would be no change in environmental impacts associated with this alternative as the regulations are protective of public health and safety and the environment.

4 AGENCIES AND PERSONS CONSULTED

The NRC consulted with the DOT during the preparation of the proposed rule and the preparation of this draft EA, consistent with the memorandum of understanding between the NRC and the DOT (NRC, 1979). The NRC also is requesting the views of the Agreement States on this draft EA.

The NRC is requesting public comment on this draft EA. The NRC intends to hold a public meeting during the proposed rule comment period to allow stakeholders to ask questions about the proposed rule and this EA. The NRC will consider comments received on the docket as it develops the final rule and the final EA. The NRC will issue the final EA when it publishes the final rule.

The proposed rulemaking changes are administrative in nature or would not result in significant impact on the environment. As such, the rulemaking would not result in impacts to federally-listed threatened or endangered species or their critical habitat; the NRC has determined that Section 7 consultation under the Endangered Species Act is not necessary. Likewise, the NRC determined that the proposed rulemaking would not have the potential to cause effects on or to historic properties. Therefore, the NRC has determined that no further consultation is required under Section 106 of the National Historic Preservation Act.

5 CONCLUSION

The Commission has preliminarily determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that the proposed amendments would not be a major Federal action significantly affecting the quality of the human environment, and therefore, an environmental impact statement is not required. The amendments would change the requirements for packaging and transportation of radioactive material. The amendments would make changes to harmonize the NRC's regulations with the 2018 Edition of the IAEA's transport standards (SSR-6) and with that of the DOT's regulations under 49 CFR and include NRC-initiated changes. The environmental impacts arising from the changes have been evaluated and would not involve any significant environmental impact. Other amendments are procedural in nature and would have no significant impact on the environment.

The NRC preliminarily determines, through this draft EA, that there would be no significant impact to the environment from this action.

6 REFERENCES

10 CFR Part 37. *Code of Federal Regulations*, Title 10, *Energy*, Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material."

10 CFR Part 51. *Code of Federal Regulations*, Title 10, *Energy*, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

10 CFR Part 71. *Code of Federal Regulations*, Title 10, *Energy*, Part 71, "Packaging and Transportation of Radioactive Material."

10 CFR Part 73. *Code of Federal Regulations*, Title 10, *Energy*, Part 73, “Physical Protection of Plants and Materials.”

49 CFR Part 173. *Code of Federal Regulations*. Title 49, *Transportation*, Part 173, “Shippers - General Requirements for Shipments and Packagings.”

DOT, 2014. “Hazardous Materials: Compatibility with the Regulations of the International Atomic Energy Agency (RRR).” Final Rule. 79 FR 40589. July 11, 2014.

Endangered Species Act of 1973, as amended. 16 USC 1531 *et seq.*

IAEA, 1973. Safety Series No. 6, “Regulations for the Safe Transport of Radioactive Material,” 1973 edition. Accessed on March 9, 2020. Available at https://gnssn.iaea.org/Superseded%20Safety%20Standards/Safety_Series_006_1973.pdf. April 1973.

IAEA, 1985. Safety Series No. 6, “Regulations for the Safe Transport of Radioactive Material,” 1985 edition. Accessed on March 9, 2020. Available at https://gnssn.iaea.org/Superseded%20Safety%20Standards/Safety_Series_006_1985.pdf. February 1985.

IAEA. 2009. Safety Requirements No. TS-R-1, “Regulations for the Safe Transport of Radioactive Material,” 2009 edition. Accessed on March 9, 2020. Available at <https://www.iaea.org/publications/8005/regulations-for-the-safe-transport-of-radioactive-material-2009-edition>. May 2009.

IAEA, 2012. Specific Safety Requirements No. SSR-6, “Regulations for the Safe Transport of Radioactive Material,” 2012 edition. Accessed on March 9, 2020. Available at <https://www.iaea.org/publications/8851/regulations-for-the-safe-transport-of-radioactive-material-2012-edition>. October 2012.

IAEA, 2018. Specific Safety Requirements No. SSR-6, “Regulations for the Safe Transport of Radioactive Material,” 2018 edition. Accessed on March 9, 2020. Available at <https://www.iaea.org/publications/12288/regulations-for-the-safe-transport-of-radioactive-material>. June 2018.

National Environmental Policy Act of 1969, as amended. 42 USC 4321 *et seq.*

National Historic Preservation Act of 1966, as amended. 16 USC 470 *et seq.*

NRC, 1979. “Transportation of Radioactive Materials; Memorandum of Understanding,” between DOT and NRC. 44 FR 38690. July 2, 1979.

NRC, 1997. “Statement of Principles and Policy for the Agreement State Program; Policy Statement on Adequacy and Compatibility of Agreement State Programs.” Final Policy Statements. 62 FR 46517. September 3, 1997.

NRC, 2015. “Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements.” Final Rule. 80 FR 33988. June 12, 2015.

NRC, 2016a. “Rulemaking Plan for Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements.”

SECY-16-0093. Rulemaking Issue: Notation Vote. ADAMS Accession No. ML16158A164. July 28, 2016.

NRC, 2016b. "Staff Requirements – SECY-16-0093 – Rulemaking Plan for Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements." Memorandum. ADAMS Accession No. ML16235A182. August 19, 2016.

NRC, 2016c. "Issues Paper on Potential Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements." Office of Nuclear Material Safety and Safeguards. ADAMS Accession Package No. ML16299A291. November 15, 2016.

NRC, 2017. "Agreement State Program Policy Statement." SECY-17-0046. Policy Issue: Notation Vote. ADAMS Accession No. ML17040A351. October 18, 2017.

NRC, 2019. "Compatibility Categories and Health and Safety Identification for NRC Regulations and Other Program Elements." Interim Procedure State Agreement (SA) SA-200. Office of Nuclear Material Safety and Safeguards. ADAMS Accession No. ML19311C784. November 19, 2019.