POLICY ISSUE
(Information)

December 2, 2021 SECY-21-0101

FOR: The Commissioners

FROM: Daniel H. Dorman
Executive Director for Operations

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION'S REGULATORY READINESS FOR OVERSIGHT OF LARGE-SCALE COMMERCIAL TRANSPORTATION OF SPENT NUCLEAR FUEL

PURPOSE:

The purpose of this paper is to inform the Commission of the staff's review of the U.S. Nuclear Regulatory Commission's (NRC's) regulatory readiness for the oversight of large-scale commercial transportation of spent nuclear fuel (SNF) in the United States. The staff documented its in-depth, holistic review in a report (Agencywide Documents Access and Management System Accession No. ML21298A164) that the staff intends to release in December 2021. The staff plans to hold public meetings beginning in January 2022 to discuss the review results with stakeholders. This paper does not address any new commitments or resource implications.

BACKGROUND:

The regulatory oversight of commercial SNF transportation in the U.S. is the responsibility of multiple Federal agencies, principally the NRC, the U.S. Department of Transportation (DOT), and the U.S. Department of Homeland Security. Outside of the Federal agencies, States, Indian Tribes, and local governments are also involved along SNF transportation routes. These governmental organizations have complementary regulatory oversight responsibilities. For example, the NRC is responsible for certifying transportation packages and for the oversight of

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operations to prepare SNF for shipment at its licensees' sites, while the DOT has the primary responsibility for oversight of shipments in transit. While having no direct role in the oversight of commercial SNF transportation, the U.S. Department of Energy is ultimately responsible for the permanent disposal of commercial SNF, in accordance with the Nuclear Waste Policy Act of 1982, as amended, and has ongoing research and development efforts related to SNF transportation.

SNF from commercial nuclear power plants is currently stored at 75 locations in the United States, primarily at operating or decommissioned plant sites. SNF is stored in spent fuel pools and in dry storage systems (casks) at independent spent fuel storage installations. The NRC received two applications to construct and operate consolidated interim storage facilities (CISFs) for SNF, using dry storage systems, at sites in Texas and New Mexico. The NRC issued a license to Interim Storage Partners, LLC, for the Texas site in September 2021 (Volume 86 of the *Federal Register* (FR), page 51926 (86 FR 51926)). A licensing decision on Holtec International's proposal in New Mexico remains pending. The construction and operation of one or both of these new CISFs could lead to large-scale commercial transportation of SNF.

Commercial transportation of SNF in the United States has been limited in recent years, consisting principally of shipments of small quantities for testing and research purposes. To prepare for a potential large-scale commercial SNF transportation campaign, staff from the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Security and Incident Response, the Office of Public Affairs (OPA), and the Office of the General Counsel (OGC) assessed the NRC's readiness for regulatory oversight of a large-scale, multimode, multipackage, extended-duration campaign, aware that uncertainties remain as to when and if the new CISFs may begin operation.

DISCUSSION:

The staff review covered 19 assessment areas, including, but not limited to, the applicable regulations and guidance, expected operations and oversight at the shipper and receiver sites, existing safety and risk evaluations, prior SNF transportation experience, communication and outreach planning, and interagency agreements for the oversight of SNF transportation.

The staff verified that the NRC has a comprehensive and established regulatory framework for the transportation of SNF that provides reasonable assurance of adequate protection of public health and safety and the environment and promotes the common defense and security. Over time, the NRC has continued to assess and improve this framework, including harmonization with international standards and updates to reflect the results of technical studies and reports. Additionally, the staff verified that the NRC regulatory framework aligns well with those of other Federal agencies with responsibilities for SNF transportation, and the NRC has well-established and strong working relationships with these Federal agencies. The staff will continue its coordination with NRC's Federal and non-Federal partners as part of preparations for any future commercial SNF shipments

The staff documented its activities in a report that describes the scope and conclusions of its review and includes a roadmap showing the roles and responsibilities of the NRC and the other responsible governmental organizations. The staff identified six specific potential enhancements, described in Section IV of the report, that would increase efficiency and effectiveness in the NRC's oversight of large-scale SNF transportation. The enhancements include updating and consolidating the safety and security inspection guidance and procedures

as well as increasing public engagement on the transportation of SNF. Additionally, the staff has developed an internal plan for implementing its recommendations.

In its review, the staff also identified the following potential policy issues, described in Section V of the report, that may require future direction from the Commission:

(1) the necessary and appropriate level of involvement of Tribes along SNF transportation routes;

(2) transportation of packages with older SNF content and considerations as to which physical security requirements may apply to a limited amount of stored SNF that has total external radiation levels below the exemption value in paragraph (b) of Title 10 of the *Code of Federal Regulations* 73.6, "Exemptions for certain quantities and kinds of special nuclear material"; and

(3) a review and possible update of the Commission's 1984 policy statement on the transportation of radioactive material (49 FR 12335) to change references to those for the current national response framework for transportation events, as the references have changed.

The staff is not seeking Commission action on these issues at this time and will prioritize and schedule any future Commission papers accordingly.

Unless directed otherwise by the Commission, the staff will release its report to the public in December 2021 and begin public outreach in 2022. Releasing the report will promote stakeholder confidence that SNF can be transported safely and securely. The report conveys the roles and responsibilities of the parties involved and clarifies that the NRC does not store or transport SNF, but rather the nuclear power industry is responsible for the storage and transport of commercial SNF. In previous outreach, the staff informed stakeholders of this readiness review, and publicly releasing the results provides further transparency of the NRC's regulatory process.

The planned outreach will also promote public confidence in the regulatory oversight process and the safety and security of SNF transportation. The staff will engage the public through webinars and public meetings as well as existing stakeholder forums, seminars, and conferences.

The Governors of Texas and New Mexico have voiced their opposition to the proposed CISFs, and litigation is pending in Federal courts challenging the NRC's actions related to the CISFs. The staff is sensitive that any public documents or statements on SNF transportation could potentially be cited in the legal actions. The staff will continue to engage with OGC, the Solicitor, and OPA to ensure coordination and avoid potential legal conflicts.

CONCLUSION:

The NRC, in coordination with its Federal partners, has a complete regulatory framework that can provide oversight for the safe and secure commercial transportation of SNF. The staff identified opportunities for enhancements in certain areas, including revising some safety and security inspection programs to provide greater efficiency; strengthening external

communication and public outreach; and continuing the ongoing coordination and collaboration activities with other Federal agencies that have regulation and oversight responsibilities for SNF transportation.

COORDINATION:

OGC has no legal objection to the staff review report or this paper. The staff is developing, with support from OPA, a communication plan for the release of the staff report.

Signed by Dorman, Dan
on 12/02/21

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