

NUCLEAR REGULATORY COMMISSION

[NRC-2015-0241]

Fuel Retrievability

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft interim staff guidance; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is requesting public comment on its draft SFM-Interim Staff Guidance (ISG) – 2, Revision 2, “Fuel Retrievability.” This revision to the guidance was developed to improve regulatory clarity due to uncertain duration of spent fuel storage in an independent spent fuel storage installation (ISFSI). The revision would provide improved guidance to the staff on the process to determine whether spent fuel storage systems are designed to allow ready retrieval of spent fuel.

DATES: Submit comments by **[INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject):

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2015-0241**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact

the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Mail comments to:** Cindy Bladey, Office of Administration, Mail Stop: OWFN-12-H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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: Emma Wong, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-7091, e-mail: Emma.Wong@nrc.gov and Haile Lindsay, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-0616, e-mail: Haile.Lindsay@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID **NRC-2015-0241** 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 Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2015-0241**.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection

at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “[ADAMS Public Documents](#)” and then select “[Begin Web-based ADAMS Search](#).” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it available in ADAMS) is provided the first time that a document is referenced. Draft ISG-2, Revision 2, is available in ADAMS under Accession No. ML15239A695.

- **NRC’s PDR:** You may examine and purchase copies of public documents at the NRC’s PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID **NRC-2015-0241** in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC posts all comment submissions at <http://www.regulations.gov> as well as entering the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information

before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Background

Section 141(b)(1)(C) of the Nuclear Waste Policy Act (NWPA) of 1982, as amended, requires that each monitored retrievable storage (MRS) facility be designed “to provide for the ready retrieval of such spent fuel and waste for further processing or disposal.” The NRC codified this portion of the NWPA in its 1988 final rulemaking, “Licensing Requirements for the Independent Spent Fuel Storage of Spent Nuclear Fuel and High-Level Radioactive Waste” (53 FR 31651; August 19, 1988). The NRC inserted, “Storage systems must be designed to allow ready retrieval of spent fuel or high-level radioactive waste for further processing or disposal,” in section 72.122(l) of title 10 of the *Code of Federal Regulations* (10 CFR) and added MRS facilities to the scope of 10 CFR part 72. This requirement currently applies to all ISFSI and MRS licensees.

The NRC’s current position on how a licensee may satisfy the requirement for “ready retrieval” under section 72.122(l) is delineated in draft ISG No. 2, Revision 1 (ADAMS Accession No. ML100550861). In essence, draft ISG-2, Rev. 1 provides guidance to the NRC staff that a licensee may demonstrate ready retrieval through a two-part approach: 1) ability to remove the individual spent fuel assemblies or canned assemblies by normal means (i.e., crane and grapple); and 2) ability to move a canister or cask containing spent fuel from the storage location.

As the duration of spent fuel storage at an ISFSI or MRS facility increases, the practical impact of the application of the first part of ready retrieval - the ability of the fuel assembly to be removed from the canister or cask by normal means – has led the staff to take a closer look at retrievability. To ensure that the application of the first part of “ready retrieval” is met as the

duration of fuel storage increases, periodic monitoring or inspection may be needed to verify the condition of the fuel and the internal components of the dry storage system, and could identify the need for possible remediation of the fuel and the internal components of the dry storage system. Because of the difficulties in accessing the fuel and the interior components, inspection, monitoring, and potential remediation may involve opening the confinement boundary of the system in order to verify the condition of the fuel and internal components. However, opening the dry storage system would expose workers to additional dose and, particularly for welded canisters, degrade or eliminate the confinement boundary.

Consistent with the NRC's ongoing work reviewing the regulatory framework for spent fuel storage and transportation (see COMSECY-10-0007, ADAMS Accession No. ML101390216), the NRC staff began exploring alternatives to the guidance on the application of ready retrieval. The staff's review has centered around whether to eliminate the first part of the guidance on ready retrieval – the ability to remove individual fuel assemblies from a canister or cask by normal means – but maintaining the second part – the ability of the canister or cask to be safely removed from the storage location. By eliminating the first part of the guidance, the dry cask storage system (i.e., dual-purpose cask or canister containing the spent fuel) would still be retrieved safely and be readied for transportation consistent with the law and regulations. This way, the spent fuel dry storage confinement continues to be maintained without the potential negative impacts associated with unnecessarily removing the individual fuel assemblies.

In an effort to engage stakeholders in this discussion, NRC staff held two public meetings on July 27, 2011, and August 16, 2012, to obtain stakeholder feedback on these topics. Additionally, in January 2013, the NRC issued a *Federal Register* notice (78 FR 3853) requesting public comment on several topics, including retrievability and cladding integrity. The NRC received comments on the *Federal Register* notice that can be found under ADAMS

Accession number ML15110A370. The staff work in this area was deferred due to higher priority work such as license renewal regulatory framework and high burn up fuel related activities. Therefore, the NRC staff held a public meeting on July 29, 2015, to provide an update on the staff's work on this issue. The meeting summary was issued on August 5, 2015 (ADAMS Accession No. ML15216A272).

The NRC staff has also considered how dry storage of spent nuclear fuel is implemented in other countries, and international guidance for spent fuel storage. The NRC staff has participated in several multilateral working groups related to extended spent fuel storage. The NRC staff reviewed the International Atomic Energy Agency's Specific Safety Guide No. SSG-15, "Storage of Spent Nuclear Fuel." This guide is consistent with the NRC's current position of retrievability and will remain consistent with planned changes. Additionally, the NRC staff is aware that the spent fuel storage systems in Germany undergo periodic inspections at 10-year intervals, which are focused on the accessible cask components and confinement boundary (seals). The aging management program required by 10 CFR part 72 for renewal also provides for periodic inspections in the United States.

III. Proposed Action

By this action, the NRC is requesting public comments on draft ISG 2, Revision 2. This ISG proposes certain revisions to NRC guidance on implementation of the requirements in 10 CFR part 72. The NRC staff will make a final determination regarding issuance of the revised ISG after it considers any public comments received in response to this request.

IV. Backfitting and Issue Finality

This draft ISG, if finalized, would provide guidance to the NRC staff for reviewing an application for an ISFSI license with respect to compliance with the retrievability requirement of

10 CFR 10 CFR 72.122(l). Issuance of this draft ISG, if finalized, would not constitute backfitting as defined in the backfitting provisions in 10 CFR 72.62 which are applicable to ISFSIs. Issuance of the draft ISG, if finalized, would also not constitute backfitting under 10 CFR 50.109, or otherwise be inconsistent with the issue finality provisions in 10 CFR part 52 for generally licensed ISFSIs. The staff's position is based upon the following considerations.

1. The draft ISG positions, if finalized, do not constitute backfitting, inasmuch as the ISG is internal guidance to the NRC staff.

The ISG provides interim guidance to the staff on how to review an application for NRC regulatory approval in the form of licensing. Changes in internal staff guidance are not matters for which either ISFSI or nuclear power plant applicants or licensees are protected under the backfitting provisions in 10 CFR parts 50 or 72, or the issue finality provisions of part 52.

2. Backfitting and issue finality do not—with limited exceptions not applicable here—protect current or future applicants.

Applicants and potential applicants are not, with certain exceptions, protected by the backfitting provisions in 10 CFR 72.62 or 10 CFR 50.109, or any issue finality provisions under part 52. This is because neither the backfitting provisions nor the issue finality provisions under part 52 – with certain exclusions discussed below – were intended to apply to every NRC action which substantially changes the expectations of current and future applicants. The exceptions to the general principle are applicable whenever an applicant references a part 52 license (e.g., an early site permit) and/or NRC regulatory approval (e.g., a design certification rule) with

specified issue finality provisions. However, the matters covered in this ISG are not subject matters or issues for which issue finality protection is provided.

3. The NRC has no intention to impose the ISG on existing ISFSI or nuclear power plant licenses either now or in the future (absent a voluntary request for change from the licensee).

The NRC staff does not intend to impose or apply the positions described in the ISG to existing (already issued) licenses (e.g., ISFSI licenses, operating licenses and combined licenses) absent a voluntary request for a change from the licensee. Hence, the ISG need not be evaluated as if it were a backfit.

Dated at Rockville, Maryland, this 14th day of October, 2015.

For the Nuclear Regulatory Commission.

/RA/

Mark Lombard, Director
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards