

NUCLEAR REGULATORY COMMISSION

[NRC-2020-0203]

Fresh and Spent Fuel Pool Criticality Analyses

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment draft regulatory guide (DG), DG-1373, "Fresh and Spent Fuel Pool Criticality Analyses." This draft guide, if finalized as a new regulatory guide (RG), would update and supersede Interim Staff Guidance DSS-ISG-2010-01, "Staff Guidance Regarding the Nuclear Criticality Safety Analysis for Spent Fuel Pools." This draft guide describes an approach that the NRC staff considers acceptable to demonstrate that NRC regulatory requirements are met for subcriticality of fuel assemblies stored in fresh fuel vaults and spent fuel pools at light-water reactor power plants. It endorses, with clarifications and exceptions, the Nuclear Energy Institute (NEI) guidance document NEI 12-16, "Guidance for Performing Criticality Analyses of Fuel Storage at Light-Water Reactor Power Plants," Revision 4.

DATES: Submit comments by **10/23/2020**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. Although a time limit is given, comments and suggestions in connection with items for inclusion in guides currently being developed or improvements in all published guides are encouraged at any time.

ADDRESSES: You may submit comments by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2020-0203**. Address questions about Docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **Mail comments to:** Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff.

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: Kent Wood, Office of Nuclear Reactor Regulation, telephone: 301-415-4120, e-mail: Kent.Wood@nrc.gov, and Michael Eudy, Office of Nuclear Regulatory Research, telephone: 301-415-3104, e-mail: Michael.Eudy@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID **NRC-2020-0203** 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 <https://www.regulations.gov> and search for Docket ID **NRC-2020-0203**.

- **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 "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov.

B. Submitting Comments

Please include Docket ID **NRC-2020-0203** in your comment submission.

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 will post all comment submissions at <https://www.regulations.gov> as well as enter 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 into ADAMS.

II. Additional Information

The NRC is issuing for public comment a draft guide in the NRC's "Regulatory Guide" series. This series was developed to describe methods that are acceptable to the NRC staff for implementing specific parts of the agency's regulations, to explain

techniques that the staff uses in evaluating specific issues or postulated events, and to describe information that the staff needs in its review of applications for permits and licenses.

The DG, titled “Fresh and Spent Fuel Pool Criticality Analyses,” is a proposed new RG temporarily identified by its task number, DG-1373 (ADAMS Accession No. ML20182A788). It endorses, with clarifications and exceptions, the NEI guidance document NEI 12-16, Revision 4, (ADAMS Accession No. ML19269E069). This DG proposes guidance to meet regulatory requirements for subcriticality of fuel assemblies stored in fresh fuel vaults and spent fuel pools at light-water reactor power plants. This DG provides clarity and consistency regarding the necessary scope of efforts for applicants and licensees to demonstrate compliance with the requirements for performing criticality analyses of fuel storage at light-water reactor power plants under section 50.68(b) of title 10 of the *Code of Federal Regulations* (10 CFR). This DG applies to applicants and licensees subject to 10 CFR part 50, “Domestic Licensing of Production and Utilization Facilities,” or 10 CFR part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.”

In addition, this proposed new RG, if finalized, would update and supersede Interim Staff Guidance (ISG) DSS-ISG-2010-01 (ADAMS Accession No. ML110620086). The ISG was issued in 2011 to support the staff’s review of methods for performing criticality analyses submitted to demonstrate compliance with 10 CFR 50.68(b). The staff would withdraw DSS-ISG-2010-01 concurrently with the issuance of this new RG. Licensees using DSS-ISG-2010-01 to demonstrate compliance with NRC requirements may continue using that guidance as long as they do not change their licensing bases relative to that guidance.

The staff is also issuing for public comment a draft regulatory analysis (ADAMS Accession No. ML20205L563). The staff develops a regulatory analysis to assess the value of issuing or revising a regulatory guide as well as alternative courses of action.

III. Backfitting, Forward Fitting, and Issue Finality

DG-1373, if finalized, would provide guidance for performing criticality analyses of fuel storage at light-water reactor power plants. Issuance of DG-1373, if finalized, would not constitute backfitting as defined in 10 CFR 50.109, "Backfitting," and as described in NRC Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests," (Ref. 18); affect issue finality of any approval issued under 10 CFR part 52; or constitute forward fitting as defined in Management Directive 8.4. As explained in DG-1373, licensees are not required to comply with the positions set forth in this guide.

Dated: September 2, 2020.

For the Nuclear Regulatory Commission.

/RA/

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