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## **NUCLEAR REGULATORY COMMISSION**

**[NRC-2017-0183]**

### **Nuclear Criticality Safety Standards for Nuclear Materials Outside Reactor Cores**

**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-3053, “Nuclear Criticality Safety Standards for Nuclear Materials Outside Reactor Cores.” This DG would be published as Revision 3 to Regulatory Guide (RG) 3.71. The proposed revision would provide methods that are acceptable to the NRC staff for criticality safety standards used with nuclear materials outside reactor cores. The revision would provide up-to-date guidance based on changes to American National Standards Institute/American Nuclear Society (ANSI/ANS)-8 standards. The revision would also endorse International Organization for Standardization (ISO) Standard 7753:1987, “Nuclear Energy—Performance and Testing Requirements for Criticality Detection and Alarm Systems.”

**DATES:** Submit comments by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. 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 <http://www.regulations.gov> and search for Docket ID **NRC-2017-0183**. Address questions about NRC dockets to Carol Gallagher;

telephone: 301-415-3463; e-mail: [Carol.Gallagher@nrc.gov](mailto: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: TWFN-8-D36M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

For additional direction on accessing information and submitting comments, see “Obtaining Information and Submitting Comments” in the **SUPPLEMENTARY INFORMATION** section of this document.

**FOR FURTHER INFORMATION CONTACT:** Christopher Tripp, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-8741, e-mail: [Christopher.Tripp@nrc.gov](mailto:Christopher.Tripp@nrc.gov), and Harriet Karagiannis, telephone: 301-415-2493, e-mail: [Harriet.Karagiannis@nrc.gov](mailto:Harriet.Karagiannis@nrc.gov), Office of Nuclear Regulatory Research. Both are staff members 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-2017-0183** when contacting the NRC about the availability of information regarding this action. You may obtain publically-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-2017-0183**.

- **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](mailto:pdr.resource@nrc.gov). The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document. The DG-3053 is available in ADAMS under Accession No. ML17055B591.

- **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-2017-0183** 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 posts all comment submissions at <http://www.regulations.gov> as well as enters 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. Additional Information

The NRC is issuing for public comment a DG in the NRC’s “Regulatory Guide” series. This series was developed to describe and make available to the public information regarding

methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific issues or postulated events, and data that the staff needs in its review of applications for permits and licenses.

The DG, entitled "Nuclear Criticality Safety Standards for Nuclear Materials Outside Reactor Cores," is a proposed revision temporarily identified by its task number, DG-3053. The DG-3053 is proposed Revision 3 of RG 3.71, "Nuclear Criticality Safety Standards for Nuclear Materials outside Reactor Cores." The NRC initially issued RG 3.71 in 1998, and it was revised in 2005 and again in 2010. The three previous versions of RG 3.71 endorsed specific safety standards developed by ANSI/ANS-8 to provide guidance, criteria, and best practices for use in preventing and mitigating criticality accidents during operations that involve handling, processing, storing, or transporting special nuclear material at fuel and material facilities (or a combination of these activities). The proposed Revision 3 would revise the RG based on changes to ANSI/ANS-8 standards, with certain exceptions and clarifications. The revision would also consolidate and replace a number of earlier NRC RGs, thereby incorporating all of the relevant guidance in a single document. This revision would also endorse International Organization for Standardization (ISO) Standard 7753:1987, "Nuclear Energy—Performance and Testing Requirements for Criticality Detection and Alarm Systems." In addition, the scope of this revision is expanded beyond part 70 of title 10 of the *Code of Federal Regulations* (10 CFR), fuel facilities to include transportation and storage facilities under parts 71 and 72.

### **III. Backfitting**

This DG-3053 would update RG 3.71 based on changes to ANSI/ANS standards, as well as endorsing an ISO standard and expanding the scope of the RG to include 10 CFR part 71 and part 72 licensees. Issuance of DG-3053 would not constitute backfitting under 10 CFR part 70 or part 72. As discussed in the "Implementation" section of this DG, the NRC has no

current intention to impose the DG on current holders of 10 CFR part 70 or part 72 licenses. The DG could be applied to applications for licenses issued under 10 CFR part 70 or part 72 or amendments thereto. Such action would not constitute backfitting as defined in 10 CFR 70.76 or 10 CFR 72.62, inasmuch as such applicants are not within the scope of entities protected by 10 CFR 70.76 or 10 CFR 72.62.

Dated at Rockville, Maryland, on August 18, 2017.

For the Nuclear Regulatory Commission.

**Thomas H. Boyce,**

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