



NUCLEAR REGULATORY COMMISSION

[NRC-2021-0217]

Monitoring Criteria and Methods to Calculate Occupational Radiation Doses

AGENCY: Nuclear Regulatory Commission.

ACTION: Regulatory guide; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 1 to Regulatory Guide (RG) 8.34, "Monitoring Criteria and Methods to Calculate Occupational Radiation Doses." This revised guidance is an approach that is acceptable to the staff of the NRC for monitoring and determining the dose to occupationally exposed individuals. It provides updated criteria and methods to calculate occupational radiation doses to demonstrate compliance with the NRC regulations and it reflects current generally accepted methods and procedures available for radiation protection.

DATES: Revision 1 to RG 8.34 is available on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Please refer to Docket ID **NRC-2021-0217** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2021-0217**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individuals listed in the "For Further Information Contact" section of this document.

- **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 (PDR) reference staff at 1-800-397-4209,

301-415-4737, or by email to 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.

- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's Public Document Room (PDR), Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. Eastern Time (ET), Monday through Friday, except Federal holidays.

Revision 1 to RG 8.34 and the regulatory analysis may be found in ADAMS under Accession Nos. ML22132A083 and ML21068A161, respectively.

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FOR FURTHER INFORMATION CONTACT: Steven Garry, Office of Nuclear Reactor Regulation, telephone: 301-415-2766, email: Steven.Garry@nrc.gov, and Harriet Karagiannis, Office of Nuclear Regulatory Research, telephone: 301-415-2493, email: Harriet.Karagiannis@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Discussion

The NRC is issuing a revision to an existing guide in the NRC's "Regulatory Guide" series. Regulatory guides were developed to describe and make available to the public information and methods that are acceptable to the NRC staff for implementing specific parts of the agency'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 NRC is issuing Revision 1 of RG 8.34 to describe an approach that is acceptable to the staff of the NRC for calculating the total effective dose equivalent as

the sum of the effective dose equivalent (for external exposures) and the committed dose equivalent for internal exposures. In addition, it includes the following guidance:

- performing prospective dose evaluations to determine the need for required monitoring to meet the occupational dose monitoring requirements of section 20.1502 of title 10 of the *Code of Federal Regulations* (10 CFR),

- monitoring of unplanned, unintended doses,
- monitoring dose from hot particles or contamination on or near the skin,
- defining the term “dosimetry processing” and explaining when there are requirements for processing by an accredited National Voluntary Laboratory Accreditation Program processor,

- assessing dose from intakes of radioactive material by wound injuries, and
- calculating soluble uranium intakes

II. Additional Information

The NRC published a notice of the availability of DG-8060 to RG 8.34 (ADAMS Accession No. ML21068A160), in the *Federal Register* on December 17, 2021 (86 FR 71676) for a 45-day public comment period. The public comment period was scheduled to close on January 31, 2022, however, in response to a public request, the NRC decided to extend the public comment period until March 2, 2022 (87 FR 4059), to allow more time for members of the public to develop and submit their comments. Public comments on DG-8060 and the staff responses to the public comments are available in ADAMS under Accession No. ML22117A049.

III. Congressional Review Act

This RG is a rule as defined in the Congressional Review Act (5 U.S.C. 801-808). However, the Office of Management and Budget has not found this RG to be a major rule as defined in the Congressional Review Act.

IV. Backfitting, Forward Fitting, and Issue Finality

RG 8.34, Revision 1, will provide updated guidance for reactor and non-reactor applicants and licensees regarding acceptable methods for calculating radiation doses.

Issuance of RG 8.34, Revision 1 would not constitute backfitting, as that term is defined in 10 CFR 50.109, "Backfitting," and as described in NRC Management Directive (MD) 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests"; constitute forward fitting, as that term is defined and described in MD 8.4; or affect the issue finality of any approval issued under 10 CFR part 52.

V. Submitting Suggestions for Improvement of Regulatory Guides

A member of the public may, at any time, submit suggestions to the NRC for improvement of existing RGs or for the development of new RGs. Suggestions can be submitted on the NRC's public website at <https://www.nrc.gov/reading-rm/doc-collections/reg-guides/contactus.html>. Suggestions will be considered in future updates and enhancements to the "Regulatory Guide" series.

Dated: August 24, 2022.

For the Nuclear Regulatory Commission.

Meraj Rahimi,
Chief, Regulatory Guide and Programs Management Branch,
Division of Engineering,
Office of Nuclear Regulatory Research.

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