[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2024-0036]

Draft Regulatory Guide: Preparing Probabilistic Fracture Mechanics Submittals

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment Revision 1 to draft Regulatory Guide (DG), DG-1422, “Preparing Probabilistic Fracture Mechanics Submittals.” This DG is proposed Revision 1 to Regulatory Guide (RG) 1.245, “Preparing Probabilistic Fracture Mechanics Submittals.” DG-1422, Revision 1, describes a framework to develop the contents of a licensing submittal that the staff of the NRC considers acceptable when performing probabilistic fracture mechanics (PFM) analyses in support of regulatory applications.

DATES: Submit comments by **[INSERT DATE 30 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.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the **Federal rulemaking website**.

- **Federal rulemaking website:** Go to https://www.regulations.gov and search for Docket ID **NRC-2024-0036**. Address questions about Docket IDs in Regulations.gov to Bridget Curran; telephone: 301-415-1003; email: Bridget.Curran@nrc.gov. For technical questions, contact the individual(s) 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: Christopher Nellis, Office of Nuclear Regulatory Research, telephone: 301-415-5973; email: Christopher.Nellis@nrc.gov, and Vance Petrella, Office of Nuclear Regulatory Research, telephone: 301-415-1048; email: Vance.Petrella@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-2024-0036** 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 Website:** Go to https://www.regulations.gov and search for Docket ID **NRC-2024-0036**.
- **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 ADAMS Public Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 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:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. 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 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the **Federal rulemaking website** (https://www.regulations.gov). Please include Docket ID **NRC-2024-0036** 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

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 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, entitled "Preparing Probabilistic Fracture Mechanics Submittals," is temporarily identified by its task number, DG-1422, Revision 1 (ADAMS Accession No. ML24312A308).

The NRC previously published a notice of the availability of DG-1422 in the *Federal Register* on February 29, 2024, (89 FR 14782) for a 30-day public comment period. The public comment period closed on April 1, 2024. Public comments and the staff responses to the public comments on DG-1422 are available in ADAMS under Accession No. ML24312A318. Based on significant changes to DG-1422 and a revised regulatory analysis, the staff is issuing DG-1422, Revision 1, for an additional round of public comments.

DG-1422, Revision 1, contains guidance on the contents of PFM information in regulatory applications and constitutes proposed Revision 1 to RG 1.245. The use of this proposed RG should increase the efficiency of NRC reviews of regulatory applications that use PFM as a supporting technical basis by providing a set of common guidelines for reviewers and licensees. This proposed RG presents guidance on justifying the acceptability of the methods used to generate and report PFM results. This proposed RG does not describe how the results of PFM may be used to support a regulatory application. Regulatory applications typically contain information other than fracture mechanics analyses; this proposed RG does not address the review of that other information. The revisions made to RG 1.245, Revision 0, clarify guidance for applications that leverage risk insights, such as PFM. These changes are reflected in Regulatory Positions 2.1, “Regulatory Context,” and 2.2, “Information Made Available to the NRC Staff with a Probabilistic Fracture Mechanics Submittal.”

The staff is also issuing for public comment a revised draft regulatory analysis (ADAMS Accession No. ML24312A310). The staff developed the regulatory analysis to assess the value of revising RG 1.245, Revision 0.

III. Backfitting, Forward Fitting, and Issue Finality

Issuance of DG-1422, Revision 1, would not constitute backfitting as defined in section 50.109 of title 10 of the *Code of Federal Regulations* (10 CFR), “Backfitting,” and as described in NRC Management Directive (MD) 8.4, “Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests”; affect issue finality of any

approval issued under 10 CFR part 52, “Licenses, Certificates, and Approvals for Nuclear Power Plants”; or constitute forward fitting as defined in MD 8.4, because, as explained in the RGs, licensees would not be required to comply with the positions set forth in these RGs.

IV. 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.

V. Executive Order (E.O.) 12866

The Office of Information and Regulatory Affairs determined that this DG is not a significant regulatory action under E.O. 12866.

Dated: August 5, 2025.

For the Nuclear Regulatory Commission.

Meraj Rahimi, Chief,
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