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## **NUCLEAR REGULATORY COMMISSION**

**[NRC-2019-0113]**

### **Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light Water Reactors**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Regulatory guide; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing revision 0 of regulatory guide (RG), RG 1.233, “Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light Water Reactors.” This RG provides new guidance for designers, applicants, and licensees of non-light water-cooled nuclear reactors (non-LWRs) to inform the licensing basis and content of applications to the NRC for licenses, certifications, or approvals. The RG provides guidance on using a technology-inclusive, risk-informed, and performance-based methodology to inform the licensing basis and content of applications for licenses, certifications, and approvals for non-LWRs.

**DATES:** Revision 0 to RG 1.233 is available on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Please refer to Docket ID **NRC-2019-0113** 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 Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2019-0113**. Address questions about NRC 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.

- **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 e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). Revision 0 to RG 1.233 and the regulatory analysis may be found in ADAMS under Accession Nos. ML20091L698 and ML18325A214, respectively.

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**FOR FURTHER INFORMATION CONTACT:** William Reckley, Office of Nuclear Reactor Regulation, telephone: 301-415-7490, e-mail: [William.Reckley@nrc.gov](mailto:William.Reckley@nrc.gov), or Stanley Gardocki, Office of Nuclear Regulatory Research, telephone: 301-415-1067, e-mail: [Stanley.Gardocki@nrc.gov](mailto:Stanley.Gardocki@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 new RG 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 RG, entitled "Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light Water Reactors," endorses, with clarifications, the principles and methodology in the Nuclear Energy Institute (NEI) guidance document NEI 18-04, "Risk-Informed Performance-Based Guidance for Non-Light Water Reactor Licensing Basis Development," as one acceptable method for determining the appropriate scope and level of detail for parts of applications for licenses, certifications, and approvals for non-LWRs. NEI 18-04 outlines an approach for use by reactor developers to select licensing basis events; classify structures, systems, and components; determine special treatments and programmatic controls; and assess the adequacy of a design in terms of providing layers of defense in depth. These actions are fundamental to the safe design of non-LWRs. The methodology described in NEI 18-04 and the RG also provide a general methodology for identifying an appropriate scope and depth of information to be provided in applications to the NRC for licenses, certifications, and approvals for non-LWRs required under part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities," and 10 CFR part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

## **II. Additional Information**

The NRC published a notice of the availability of DG-1353 in the *Federal Register* on May 3, 2019 (84 FR 19132), for a 60-day public comment period. The public comment period closed on July 2, 2019. Public comments on DG-1353 and the

staff responses to the public comments are available under ADAMS under Accession No. ML20091L696.

### **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 it to be a major rule as defined in the Congressional Review Act.

### **IV. Backfitting, Issue Finality, and Forward Fitting**

RG 1.233 provides guidance for informing the licensing basis and content of applications for non-LWRs. The RG does not constitute regulatory requirements. For this reason, the issuance of RG 1.233 does 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;" affect issue finality of any approval issued under 10 CFR part 52; or constitute forward fitting as defined in Management Directive 8.4. Future applicants may choose to follow the guidance or utilize another approach in developing applications for licenses, certifications, or approvals.

Dated: June 3, 2020.

For the Nuclear Regulatory Commission.

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