

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2019-0111]**

**Pre-Earthquake Planning, Shutdown, and Restart of a Nuclear Power Plant  
Following an Earthquake**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Regulatory guide; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 1 to Regulatory Guide (RG) 1.166, "Pre-Earthquake Planning, Shutdown, and Restart of a Nuclear Power Plant Following an Earthquake." This revision of RG 1.166 merges two related RGs, that is, RG 1.166 and RG 1.167, "Restart of a Nuclear Power Plant Shut Down by a Seismic Event." The guides were merged because they are similar in nature and contain overlapping guidance. RG 1.167 is being withdrawn concurrently because it is no longer needed.

**DATES:** Revision 1 to RG 1.166 is available on February 21, 2020. The withdrawal of RG 1.167 takes effect on February 21, 2020.

**ADDRESSES:** Please refer to Docket ID **NRC-2019-0111** 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-2019-0111**. Address questions about NRC docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail: [Jennifer.Borges@nrc.gov](mailto: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). RG 1.166 is available in ADAMS under Accession No. ML19266A616.

- **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.

**FOR FURTHER INFORMATION CONTACT:** Vladimir Graizer, Office of Nuclear Reactor Regulation, telephone: 301-415-2380, e-mail: [Vladimir.Graizer@nrc.gov](mailto:Vladimir.Graizer@nrc.gov); Thomas Weaver, telephone: 301-415-2383, e-mail: [Thomas.Weaver@nrc.gov](mailto:Thomas.Weaver@nrc.gov); and Edward O'Donnell, Office of Nuclear Regulatory Research, telephone: 301-415-3317, e-mail: [Edward.O'Donnell@nrc.gov](mailto:Edward.O'Donnell@nrc.gov). All 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. 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 agency's regulations, techniques that the NRC staff uses in evaluating specific issues or postulated events, and data that the NRC staff needs in its review of applications for permits and licenses.

Revision 1 of RG 1.166 was issued for public comment as Draft Regulatory

Guide (DG), DG-1337. It merges RG 1.166, “Pre-Earthquake Planning and Immediate Nuclear Power Operator Post-earthquake Actions,” and RG 1.167, “Restart of a Nuclear Power Plant Shutdown by a Seismic Event.” The revised guide incorporates lessons learned following shutdown and restart of nuclear power plants due to earthquake ground motion and post-earthquake evaluations since issuance of the two RGs in 1997. The revised guide provides guidance acceptable to the NRC staff regarding pre-earthquake planning actions, actions to determine the need to shutdown a nuclear power plant and the short-term and long-term processes, inspections and tests that are acceptable to demonstrate that a nuclear power plant is safe for restarting after a shutdown due to an earthquake. The guide endorses with some clarifications, American National Standards Institute/American Nuclear Society (ANSI/ANS)-2.23-2016, “Nuclear Power Plant Response to an Earthquake,” and ANSI/ANS-2.10-2017, “Criteria for Retrieval, Processing, Handling, and Storage of Records from Nuclear Facility Seismic Instrumentation.”

## **II. Additional Information**

The NRC published a notice of the availability of DG-1337 in the *Federal Register* on June 14, 2019 (84 FR 27809) for a 60-day public comment period. The public comment period closed on August 13, 2019. Public comments on DG-1337 and the staff responses to the public comments are available in ADAMS under Accession No. ML19266A619.

## **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, Forward Fitting, and Issue Finality**

Issuance of this regulatory guide does not constitute backfitting as defined in title 10 of the *Code of Federal Regulations* (10 CFR) section 50.109, “Backfitting,” and as described in NRC Management Directive 8.4, “Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests”; constitute forward fitting as that term is defined and described in Management Directive 8.4; or affect issue finality of any approval issued under 10 CFR part 52, “Licenses, Certificates, and Approvals for Nuclear Power Plants.” As explained in this regulatory guide, applicants and licensees are not required to comply with the positions set forth in this regulatory guide.

Dated at Rockville, Maryland, this 14<sup>th</sup> day of February, 2020.

For the Nuclear Regulatory Commission.

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