

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2021-0166]**

**Acceptability of ASME Code Section XI, Division 2, Requirements for Reliability and Integrity Management (RIM) Programs for Nuclear Power Plants, for Non-Light Water Reactors**

**AGENCY:** Nuclear Regulatory Commission

**ACTION:** Draft regulatory guide; request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment a draft regulatory guide (DG), DG-1383, "Acceptability of ASME Code Section XI, Division 2, 'Requirements for Reliability and Integrity Management (RIM) Programs for Nuclear Power Plants,' for Non-Light Water Reactors." This proposed DG describes an approach that is acceptable to the NRC staff for the development and implementation of a preservice inspection (PSI) and inservice inspection (ISI) program for non-light water reactors (non-LWRs). It endorses, with conditions, the 2019 Edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (ASME Code), Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," Division 2, for non-LWR applications. This RG also describes a method that applicants can use to incorporate PSI and ISI programs into a licensing basis.

**DATES:** Submit comments by **November 15, 2021**. 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; 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-2021-0166**. 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.

- **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:** Timothy Lupold, Office of Nuclear Reactor Regulation, telephone: 301-415-6448, email: Timothy.Lupold@nrc.gov; Stephen Philpott, Office of Nuclear Reactor Regulation, telephone: 301-415-2365, email: Stephen.Philpott@nrc.gov; and Robert Roche-Rivera, Office of Nuclear Regulatory Research, telephone: 301-415-8113, email: Robert.Roche-Rivera@nrc.gov. All 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-2021-0166** 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-2021-0166**.

- **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](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.

- **Attention:** The PDR, where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via email at [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (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-2021-0166** 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 available to the public or entering the comment 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 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, "Acceptability of ASME Code Section XI, Division 2, 'Requirements for Reliability and Integrity Management (RIM) Programs for Nuclear Power Plants,' for Non-Light Water Reactors," is a proposed new Regulatory Guide 1.246 and is temporarily identified by its task number, DG-1383 (ADAMS Accession No. ML21120A185). The staff is also issuing for public comment a draft regulatory analysis (ADAMS Accession No. ML21120A192).

This DG endorses, with conditions, the 2019 edition of ASME BPV Code, Section XI, Division 2. It also describes a method that applicants can use to incorporate PSI and ISI programs into a licensing basis. ASME BPV Code, Section XI, Division 2 provides a process for developing a RIM program similar to a traditional PSI and ISI program under ASME Code, Section XI, Division 1, "Rules for Inspection and Testing of Components of

Light-Water-Cooled Plants,” for all types of nuclear power plants. Because ASME Code, Section XI, Division 1, provides requirements for a PSI and ISI program for an LWR, the scope of this DG focuses on non-LWRs. The RIM program contains provisions beyond a traditional program, such as significant use of probabilistic risk assessment (PRA) to develop reliability targets for structures, systems, and components (SSCs) within the scope of the program. It also relies on establishing such practices as monitoring, nondestructive examination and repair and replacement to maintain the reliability of components based on the degradation mechanisms that may exist throughout the life of the plant.

ASME Code, Section XI, Division 2, also provides a process for the identification of the scope, degradation mechanisms, and reliability targets for the in-scope SSCs; identification and evaluation of RIM strategies and uncertainties; program implementation; performance monitoring; and program updates to be applied for passive components to give assurance that the reliability will meet preestablished targets (developed from the PRA information for the facility). ASME Code, Section XI, Division 2, does not stipulate any specific strategies to be employed but calls for these to be developed by expert panels, considering types of examinations currently used for ASME Code, Section XI, Division 1, and known or potential degradation mechanisms for typical materials used in the construction of nuclear facilities.

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

DG-1383, if finalized, 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” (ADAMS Accession No. ML18093B087); 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, "Licenses, Certificates, and Approvals for Nuclear Power Plants." As explained in DG-1383, applicants and licensees are not required to comply with the positions set forth in DG-1383.

Dated: September 27, 2021.

For the Nuclear Regulatory Commission.

***/RA/***

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