



[7590-01-P]

## NUCLEAR REGULATORY COMMISSION

RIN 3150-AI01

[NRC-2014-0137]

### Regulatory Guidance and Technical Basis on the Alternate Pressurized Thermal Shock Rule

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Regulatory guide; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 0 to Regulatory Guide (RG) 1.230, "Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule" and the associated technical basis, NUREG-2163, "Technical Basis for Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule." This guidance describes a method that the NRC staff considers acceptable to permit use of the alternate fracture toughness requirements for protection against pressurized thermal shock events for pressurized water reactor pressure vessels.

**DATES:** Revision 0 to RG 1.230 is available on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Please refer to Docket ID **NRC-2014-0137** when contacting the NRC about the availability of information regarding this document. You may obtain publically-available information related to this document, using the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2014-0137**. Address questions about 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 Document collection at <http://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). The ADAMS accession number for each document referenced in this notice (if that document is available in ADAMS) is provided the first time that a document is referenced. Revision 0 to Regulatory Guide 1.230, and the regulatory analysis may be found in ADAMS under Accession No. ML15344A402 and ML14056A013 respectively. Revision 0 to NUREG-2163 may be found in ADAMS under Accession No. ML18255A118.

- **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.

Regulatory guides are not copyrighted, and NRC approval is not required to reproduce them.

**FOR FURTHER INFORMATION CONTACT:** Mark Kirk, Office of Nuclear Regulatory Research, telephone: 301-415-2456, e-mail: [Mark.Kirk@nrc.gov](mailto:Mark.Kirk@nrc.gov), and Stephen Burton, Office of Nuclear Regulatory Research, telephone: 301-415-7000, e-mail: [Stephen.Burton@nrc.gov](mailto:Stephen.Burton@nrc.gov). Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The NRC is issuing a new 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 0 of RG 1.230 was issued with a temporary identification of Draft Regulatory Guide, DG-1299. This RG is being issued to describe a method that the staff of the NRC considers acceptable to meet the alternate fracture toughness requirements for protection against pressurized thermal shock (PTS) events for pressurized water reactor (PWR) reactor pressure vessels (RPVs) in section 50.61a of title 10 of the *Code of Federal Regulations* (10 CFR), "Alternate Fracture Toughness Requirements for Protection against Pressurized Thermal Shock Events." The alternate PTS requirements are based on updated analysis methods, whereas the requirements in 10 CFR 50.61, "Fracture Toughness Requirements for Protection against Pressurized Thermal Shock Events," are based on overly conservative probabilistic fracture mechanics analyses.

NUREG-2163 explains the basis for the requirements that establish the threshold conditions to permit use of 10 CFR 50.61a in lieu of 10 CFR 50.61 and describes methods by which the following four requirements can be met: (1) criteria relating to the date of construction and design requirements, (2) criteria relating to evaluation of plant specific surveillance data, (3) criteria relating to inservice inspection data and non-destructive examination requirements, and (4) criteria relating to alternate limits on embrittlement. Revision 0 of RG 1.230 also describes these methods in a manner consistent with NUREG-2163.

## **II. Additional Information**

The DG-1299 and draft NUREG-2163 were published in the *Federal Register* on March 13, 2015 (80 FR 13449) for a 60-day public comment period. The public comment period closed on May 12, 2015. Public comments on DG-1299 and draft

NUREG-2163 and the NRC staff responses to the public comments are available in ADAMS under Accession No. ML15344A398.

### **III. Congressional Review Act**

RG 1.230 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 and Issue Finality**

The RG 1.230 provides guidance on the methods acceptable to the NRC for complying with the NRC's regulations associated with alternate fracture toughness requirements for protection against PTS events for PWR RPVs. NUREG-2163 provides technical bases that support the RG. The RG, like the alternate PTS requirements of 10 CFR 50.61a, applies to holders of operating licenses for a PWR whose construction permit was issued before February 3, 2010.

Issuance of this RG and NUREG does not constitute backfitting under 10 CFR part 50. As discussed in the "Implementation" section of RG 1.230, the NRC has no current intention to impose the RG on current holders of 10 CFR part 50 operating licenses. Also, this RG is the first guidance issued for the 10 CFR 50.61a final rule, which itself was an alternative to 10 CFR 50.61 and therefore not a backfit on current licensees (75 FR 1322; January 4, 2010). The first issuance of guidance on a newly-added rule does not constitute backfitting when, as here, the guidance is consistent with the regulatory requirements in the newly-added rule, and the backfitting considerations applicable to the newly-added rule apply to this guidance. Therefore, issuance of RG 1.230 does not constitute backfitting within the definition provided in 10 CFR 50.109(a)(1).

Dated at Rockville, Maryland, this 20<sup>th</sup> day of September, 2018.

For the Nuclear Regulatory  
Commission.

Thomas H. Boyce, Chief,  
Regulatory Guidance and Generic Issues  
Branch,  
Division of Engineering,  
Office of Nuclear Regulatory Research.

[FR Doc. 2018-20827 Filed: 9/24/2018 8:45 am; Publication Date: 9/25/2018]