

NUCLEAR REGULATORY COMMISSION

[NRC-2022-0036]

**Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant
Accident**

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment draft regulatory guide (DG), DG-1385, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident." This DG is proposed Revision 5 to Regulatory Guide (RG) 1.82, which describes an approach that may be used to determine quality standards acceptable to the NRC staff, to meet the regulatory requirements for sumps and suppression pools that provide water sources for emergency core cooling, containment heat removal, or containment atmosphere cleanup systems. It also provides guidelines for evaluating the adequacy and the availability of the sump or suppression pool for long-term recirculation cooling following a loss-of-coolant-accident, and the use of containment accident pressure in determining the net positive suction head for the emergency core cooling and containment heat removal pumps. This proposed revision guidance applies to both the pressurized-water reactor (PWR) and boiling-water reactor (BWR) types of light-water reactors.

DATES: Submit comments by **March 8, 2022**. 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-2022-0036**. 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: Ahsan Sallman, Office of Nuclear Reactor Regulation, telephone: 301-415-2380 email: Ahsan.Sallman@nrc.gov or James Steckel, Office of Nuclear Regulatory Research, telephone: 301-415-1026 email: James.Steckel@nrc.gov. Both are staff members 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-2022-0036** when contacting the NRC about the availability of information regarding 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-2022-0036**.

- **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 Web-based ADAMS 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:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. 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 8:00 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-2022-0036** 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 posts all comment submissions at <https://www.regulations.gov> as well as enters 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 submissions 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, titled "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," is temporarily identified by its task number, DG-1385 (ADAMS Accession No. ML21266A185). DG-1385 is proposed Revision 5 to RG 1.82, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident" (ADAMS Package Accession No. ML21081A042). The proposed revision guidance, applicable to both the PWR and BWR types of light-water reactors, may be used to determine acceptable methods to meet the regulatory requirements for sumps and suppression pools that provide water sources for emergency core cooling, containment heat removal, or containment atmosphere cleanup systems for satisfying General Design Criterion 1, "Quality Standards and Records," as set forth in Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as Is Reasonably Achievable' for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents," of part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities."

Changes are being made to provide guidance on the use of containment accident pressure in determining the net positive suction head margin for the emergency core cooling system and containment heat removal pumps. The proposed revision also incorporates new information regarding the effects of debris on long-term core cooling (LTCC) since Revision 4, (03/2012) of RG 1.82 was issued.

The staff is also issuing for public comment a draft regulatory analysis (ADAMS Accession No. ML21266A186). The staff develops a regulatory analysis to assess the value of issuing or revising a regulatory guide as well as alternative courses of action.

III. Backfitting, Forward Fitting, and Issue Finality

Issuance of DG-1385, if finalized, would not constitute backfitting as defined in 10 CFR 50.109, "Backfitting," and as described in NRC Management Directive (MD) 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests"; 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.

Dated: February 2, 2022.

For the Nuclear Regulatory Commission.

/RA/

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