

NUCLEAR REGULATORY COMMISSION

[NRC-2022-0036]

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

AGENCY: Nuclear Regulatory Commission.

ACTION: Regulatory guide; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 5 of Regulatory Guide (RG) 1.82, "Water Sources for Long-Term Cooling Following a Loss-of-Coolant Accident." This revised guidance updates the guidance 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.

DATES: Revision 5 to RG 1.82 is available on **August 8, 2022**.

ADDRESSES: Please refer to Docket ID **NRC-2022-0036** 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 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.

- **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 questions regarding use of 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. 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. Eastern Time (ET), Monday through Friday, except Federal holidays

Revision 5 to RG 1.82 may be found in ADAMS under Accession No. ML22152A114.

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FOR FURTHER INFORMATION CONTACT: Ahsan Sallman, Office of Nuclear Reactor Regulation, telephone: 301-415-2380, email: Ahsan.Sallman@nrc.gov, and James Steckel, Office of Nuclear Regulatory Research, telephone: 301-415-1026, email: James.Steckel@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 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, 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.

Revision 5 of RG 1.82 was issued with a temporary identification number of DG-1385 (ADAMS Accession No. ML21266A185).

Revision 5 of RG 1.82, 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. Revision 5 of RG 1.82 also provides acceptable methods 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.

II. Additional Information

In January 2015 the staff conducted a periodic review of Revision 4 to RG 1.82, and on January 21, 2015, the staff reported the results of the periodic review, "Result of Periodic Review of Regulatory Guide 1.82," (ADAMS Accession No. ML14345A333). Based on the results of the periodic review, the staff concluded that a revision of RG 1.82 was warranted.

The NRC published a notice of availability of DG-1385 in the *Federal Register* on February 8, 2022 (87 FR 7209) for a 30-day public comment period. A request from the Nuclear Energy Institute to allow more time for members of the public to submit their comments was accepted, and the public comment period was extended to April 8, 2022 (87 FR 13019). Public comments and staff responses to those comments are available in ADAMS under Accession No. ML22145A479. In addition, staff considered and addressed technical issues related to the periodic review of RG 1.82, Revision 4.

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

The issuance of this regulatory guide does 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 8.4, “Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests,” or affect issue finality of any approval issued under 10 CFR part 52, “Licenses, Certificates, and Approvals for Nuclear Power Plants,” because, as explained in this regulatory guide, licensees are not required to comply with the positions set forth in this regulatory guide.

V. Submitting Suggestions for Improvement of Regulatory Guides

A member of the public may, at any time, submit suggestions to the NRC for improvement of existing RGs or for the development of new RGs. Suggestions can be submitted on the NRC’s public website at <https://www.nrc.gov/reading-rm/doc-collections/reg-guides/contactus.html>. Suggestions will be considered in future updates and enhancements to the “Regulatory Guide” series.

Dated: August 3, 2022.

For the Nuclear Regulatory Commission.

/RA/

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