

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

[NRC-2022-0159]

**Regulatory Guide: Maintenance, Testing, and Replacement of Vented Lead-Acid
Storage Batteries for Production and Utilization Facilities**

AGENCY: Nuclear Regulatory Commission.

ACTION: Final guide; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 4 of Regulatory Guide (RG) 1.129, "Maintenance, Testing, and Replacement of Vented Lead-Acid Storage Batteries for Production and Utilization Facilities." This revised guidance provides information to manage vented lead-acid battery degradation such that a battery in service would retain its readiness for supporting design-basis events. It endorses, with certain clarifying regulatory positions, Institute of Electrical and Electronics Engineers (IEEE) Standard (Std.) 450-2020, which provides the recommended maintenance, test schedules, and testing procedures intended to optimize the life and performance of permanently installed vented lead-acid storage batteries used for standby power applications. It also provides guidance to determine when batteries should be replaced.

DATES: Revision 4 to RG 1.129 is available on **March 27, 2023**.

ADDRESSES: Please refer to Docket ID **NRC-2022-0159** 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-2022-0159**. 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 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

Revision 4 to RG 1.129 and the regulatory analysis may be found in ADAMS under Accession Nos. ML22332A409 and ML22026A443, respectively.

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FOR FURTHER INFORMATION CONTACT: Sheila Ray, Office of Nuclear Reactor Regulation, telephone: 301-415-3653; email: Sheila.Ray@nrc.gov; and James Steckel, Office of Nuclear Regulatory Research, telephone: 301-415-1026; email:

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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 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 4 of RG 1.129 was issued with a temporary identification number of DG-1401 (ADAMS Accession No. ML22026A441).

Revision 4 of RG 1.129 describes an approach that may be used to determine quality standards acceptable to the NRC staff to meet the regulatory requirements provides guidance to manage vented lead-acid battery degradation such that a battery in service would retain its readiness for supporting design-basis events. Revision 4 of RG 1.129 also endorses, with certain clarifying regulatory positions, IEEE Std. 450-2020, which provides the recommended maintenance, test schedules, and testing procedures intended to optimize the life and performance of permanently installed vented lead-acid storage batteries used for standby power applications. It also provides guidance to determine when batteries should be replaced.

II. Additional Information

The NRC issued RG 1.129, Revision 3, in September 2013, to endorse (with certain clarifying regulatory positions) IEEE Std. 450-2010. Since then, IEEE has revised the standard as IEEE Std. 450-2020 to provide clarifying guidance on

maintenance, testing, and corrective actions. The revised IEEE standard provides guidance for the condition monitoring of stationary batteries. The staff determined that, based on the revised IEEE standard, a revision to this RG is necessary for guidance to support new license applications, design certifications, and applications for license amendments.

The NRC published a notice of availability of DG-1401 in the *Federal Register* on August 29, 2022 (87 FR 52814) for a 30-day public comment period. There were no comments from the public submitted for DG-1401, and no staff responses were needed.

As noted in the *Federal Register* on December 9, 2022 (87 FR 75671), this document is being published in the “Rules” section of the *Federal Register* to comply with publication requirements under 1 CFR chapter I.

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 RG 1.129, Revision 4 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 (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 RG 1.129, Revision 4, applicants and 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: March 22, 2023.

For the Nuclear Regulatory Commission.

/RA/

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