# REGULATORY ANALYSIS

## DRAFT REGULATORY GUIDE DG-1401
## MAINTENANCE, TESTING, AND REPLACEMENT OF VENTED LEAD-ACID STORAGE BATTERIES FOR PRODUCTION AND UTILIZATION FACILITIES

(Proposed Revision 4 of Regulatory Guide 1.129, issued September 2013)

## 1. Statement of the Problem

The U.S. Nuclear Regulatory Commission (NRC) is considering revising Regulatory Guide (RG) 1.129, currently titled, "Maintenance, Testing, and Replacement of Vented Lead-Acid Storage Batteries for Nuclear Power Plants," to review and endorse the latest revision of the Institute of Electrical and Electronics Engineers (IEEE) Standard (Std.) 450-2020, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications."

The NRC published Revision 3 of RG 1.129 in September 2013 to provide licensees and applicants with agency-approved guidance with regard to the maintenance, testing, and replacement of vented lead-acid storage batteries in production and utilization facilities.

## 2. Objective

The objective of this regulatory action is to assess the need to update NRC guidance regarding the method for performing maintenance, testing, and replacement of stationary vented lead-acid storage batteries.

## 3. Alternative Approaches

The NRC staff considered the following alternative approaches:

(1) Do not revise RG 1.129.

(2) Withdraw RG 1.129.

(3) Revise RG 1.129 to address the current version of IEEE Std. 450-2020.

Alternative 1: Do Not Revise Regulatory Guide 1.129

Under this alternative, the NRC would not revise RG 1.129, and the current guidance would be retained. If the NRC does not take action, there would be no changes in costs or benefit to the public, licensees, or the NRC. This alternative is considered the "no-action" alternative and provides a baseline condition from which any other alternatives will be assessed. However, the "no-action" alternative would not provide new clarifications and updated guidance to the current version of the RG. The NRC would continue to review each application on a case-by-case basis. This may result in the NRC issuing requests for additional information to applicants. Applicants would be burdened by the effort required to respond to the requests for

additional information, and the NRC staff would be burdened by the need to review the applicant responses.

Alternative 2: Withdraw Regulatory Guide 1.129

Under this alternative the NRC would withdraw this RG and eliminate the only readily available description of the methods the NRC staff considers acceptable for demonstrating compliance with applicable regulations for the maintenance, testing, and replacement of vented lead-acid storage batteries. Although this alternative would be less costly than the proposed alternative, it would impede the public's accessibility to the most current regulatory guidance. The burden on applicants would also be greater under this alternative, because without specific guidance, applicants might spend more time preparing applications and potentially responding to requests for additional information.

Alternative 3: Revise Regulatory Guide 1.129

Under this alternative, the NRC would revise RG 1.129. This revision would incorporate the latest information in IEEE Std. 450-2020, which is the most current version of the consensus standard. By revising RG 1.129, the NRC would ensure that the guidance available in this area is current and accurately reflects the staff's position.

Revising this RG to endorse the current version of the IEEE consensus standard is consistent with the NRC policy of evaluating the latest versions of consensus standards to determine their suitability for endorsement by RGs. This approach also complies with the NRC's Management Directive (MD) 6.5, "NRC Participation in the Development and Use of Consensus Standards," issued October 2016 (Agencywide Documents Access and Management System Accession No. ML16193A497). This is in accordance with the National Technology Transfer and Advancement Act of 1995 (Public Law 104-113).

The impact on the NRC would be the costs associated with preparing and issuing the RG revision. The impact on the public would be the voluntary costs associated with reviewing and providing comments to the NRC during the public comment period. The value to the NRC staff and its applicants would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for license applications and other interactions between the NRC and its regulated entities.

## Conclusion

Based on this regulatory analysis, the NRC staff concludes that the revision of RG 1.129 is warranted. This action will increase efficiency and effectiveness by using up-to-date guidance for ensuring reactor safety. The revision will enhance the ability of applicants, licensees, and the NRC staff to perform qualification evaluations of safety-related and Class 1E batteries.