

# REGULATORY ANALYSIS

## DRAFT REGULATORY GUIDE DG-1338 Qualification of Safety-Related Vented Lead-Acid Storage Batteries for Nuclear Power Plants *(Proposed Revision 1 of RG 1.158, dated February 1989)*

### 1. Statement of the Problem

The current version of regulatory guide (RG) 1.158 (Revision 0) was issued in 1989 to endorse the Institute of Electrical and Electronics Engineers (IEEE) Standard (Std.) 535-1979, "IEEE Standard for Qualification of Class IE Lead Storage Batteries for Nuclear Power Generating Stations." The 1979 version of the IEEE Std. does not address the qualification of safety-related batteries with duty cycles in excess of 8 hours nor does the 1979 IEEE Std. incorporate modern or current methods for qualifying safety-related batteries. Both of these features are required to support new reactor license applications, design certifications, and applications for license amendments.

### 2. Objective

The staff of the U.S. Nuclear Regulatory Commission (NRC) proposes revising RG 1.158 to endorse IEEE Std. 535-2013, which is the most current version of the IEEE Std.

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 national consensus standards to determine their suitability for endorsement by regulatory guides. This approach also will comply with the NRC's Management Directive 6.5 – "NRC Participation in the Development and Use of Consensus Standards" (ML16193A497), which provides direction for implementing the National Technology Transfer and Advancement Act of 1995, Public Law 104-113 by promoting the efficient use of NRC resources through the use of consensus standards in lieu of developing Government-unique standards.

### 3. Alternative Approach

The NRC staff considered the following alternative approaches:

1. Do not revise RG 1.158
2. Withdraw RG 1.158
3. Revise RG 1.158 to endorse the current version of IEEE Std. 535.

#### Alternative 1. – Do not revise RG 1.158

Under this alternative, the NRC would not revise RG 1.158, and the current guidance would be retained. This alternative is considered the "no-action" alternative and provides a baseline condition from which any other alternatives will be assessed. If the NRC does not take action, there would not be any changes in costs or benefit to the public, licensees or the NRC. However, the "no-action" alternative would not address identified concerns with the current version of the RG. The NRC would continue to review each application on a case-by-case basis.

### Alternative 2. – Withdraw RG 1.158

Under this alternative, the NRC would withdraw the RG. This would eliminate the problems identified above regarding the RG. It would also eliminate the only readily available description of the methods the NRC staff considers acceptable for demonstrating compliance with the applicable regulations. Although this alternative would be less costly than the proposed alternative, it would impede the public's access to the most current guidance.

### Alternative 3. – Revise RG 1.158

Under this alternative, the NRC would revise RG 1.158. This revision would endorse IEEE Std. 535-2013 which is the most current version of the consensus standard. By revising RG 1.158 the NRC would ensure that the guidance available in this area is current, and accurately reflects the staff's position.

The impact to the NRC would be the costs associated with preparing and issuing the RG revision. The impact to the public would be the voluntary costs associated with reviewing and providing comments to the NRC during the public comment period. The value to 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 1.158 is warranted. The revision will enhance the ability of applicants, licensees, and the NRC staff to perform qualification evaluations of safety-related batteries.