

# **REGULATORY ANALYSIS**

## **DRAFT REGULATORY GUIDE DG-1333 GUIDELINES FOR EVALUATING ELECTROMAGNETIC AND RADIO-FREQUENCY INTERFERENCE IN SAFETY-RELATED INSTRUMENTATION AND CONTROL SYSTEMS**

*(Proposed revision 2 to RG 1.180, dated October 2003)*

### **1. Statement of the Problem**

The current version of regulatory guide (RG) 1.180 (Revision 1) was issued in 2003. Since that time, new requirements have been identified, previously endorsed standards have been revised, additional industry guidance has been developed, operational environments have changed, and specific concerns with some of the testing methodologies have been identified. Hence, the goal of this analysis is to determine if the US Nuclear Regulatory Commission (NRC) should pursue a new revision of the RG (Revision 2).

### **2. Objective**

The staff of the NRC contracted with Oak Ridge National Laboratories (ORNL) to evaluate Revision 1 of RG 1.180 and, if appropriate, develop a technical basis for revising RG 1.180. The evaluation determined that RG 1.180 should be revised to address the most current standards and testing methodologies. The technical basis for updating RG 1.180 is available in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession number ML16112A369 and accompanies this regulatory analysis.

Revising this RG to endorse the current versions of the consensus standards 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 (MD) 6.5, "NRC Participation in the Development and Use of Consensus Standards" (ML16193A497). This is also in accordance with Public Law 104-113, "National Technology Transfer and Advancement Act of 1995."

### **3. Alternative Approach**

The NRC staff considered the following alternative approaches:

1. Do not revise RG 1.180
2. Withdraw RG 1.180
3. Revise RG 1.180 to endorse the current versions of the consensus standards

#### **Alternative 1. – Do not revise RG 1.180**

Under this alternative, the NRC would not revise RG 1.180, 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.

### Alternative 2. – Withdraw RG 1.180

Under this alternative the NRC would withdraw this 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 accessibility to the most current guidance.

### Alternative 3 – Revise RG 1.180

Under this alternative, the NRC would revise RG 1.180. This revision would the current versions of the consensus standards. By revising RG 1.180 the NRC would ensure that the RG 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 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 1.180 is warranted. The revision will enhance the ability of applicants, licensees, and the NRC staff to perform safety evaluations of accident monitoring instrumentation for nuclear power plants.