

REGULATORY ANALYSIS

DRAFT REGULATORY GUIDE DG-1442 QUALIFICATION OF SAFETY-RELATED CABLES AND FIELD SPLICES FOR PRODUCTION AND UTILIZATION FACILITIES

(Proposed Revision 1 of Regulatory Guide 1.211, dated April 2009)

1. Statement of the Problem

The U.S. Nuclear Regulatory Commission (NRC) is considering issuing a revised Regulatory Guide (RG) on how an applicant/licensee can meet the regulatory requirements for the environmental qualification of safety-related cables and field splices in production and utilization facilities. This RG will endorse, subject to the conditions described in Section C of the RG, Institute of Electrical and Electronic Engineers (IEEE) Standard (Std.) 383-2023, "IEEE Standard for Qualifying Electric Cables and Splices for Nuclear Facilities." This proposed RG is also intended to incorporate the NRC's implementation of a risk informed, performance-based approach to licensing and will apply to production and utilization facilities licensed under Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," or 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," which include operating reactors, new reactors, small modular reactors, and advanced reactors.

2. Objective

The objective of this regulatory analysis is to compare alternatives and assess the need to update NRC guidance and provide applicants/licensees with a method to demonstrate compliance with the requirements given in 10 CFR Part 50 or in 10 CFR Part 52.

3. Alternative Approaches

The NRC staff considered the following alternative approaches:

1. Do not revise Regulatory Guide 1.211
2. Withdraw Regulatory Guide 1.211
3. Revise Regulatory Guide 1.211 to address the current methods and procedures.

Alternative 1: Do Not Revise Regulatory Guide 1.211

Under this alternative, the NRC would not revise the guidance, and the current guidance would be retained. If NRC does not take action, there would not be any changes in costs or benefit to the public, licensees or 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 address identified concerns with the current version of the regulatory guide. The NRC would continue to review each application on a case-by-case basis.

Alternative 2: Withdraw Regulatory Guide 1.211

Under this alternative the NRC would withdraw this regulatory guide. This would eliminate the problems identified above regarding the regulatory guide. It would also eliminate the only readily available description of the methods the NRC staff considers acceptable for demonstrating compliance with 10 CFR Part 50 or 52. Although this alternative would be less costly than the proposed alternative, it would impede the public's accessibility to the most current regulatory guidance.

Alternative 3: Revise Regulatory Guide 1.211

Under this alternative, the NRC would revise Regulatory Guide 1.211. This revision would incorporate the latest information by endorsing Institute of Electrical and Electronic Engineers Standard 383-2023. By doing so, 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 regulatory guide 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.

4. Conclusion

Revising the Regulatory Guide 1.211 to endorse portions of a 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 will also comply with the NRC's Management Directive (MD-6.5) – "NRC Participation in the Development and Use of Consensus Standards" (ML100600460). This is in accordance with Public Law 104-113, "National Technology Transfer and Advancement Act of 1995."

Based on this regulatory analysis, the NRC staff concludes that the revision of Regulatory Guide 1.211 Revision 0 is warranted. The action will enhance nuclear power plant safety by providing up-to-date guidance and information on the environmental qualification of safety related cables and splices for production and utilization facilities.