

Regulatory Guide Periodic Review

Regulatory Guide Number: 1.209, Revision 0

Title: Guidelines for Environmental Qualification of Safety Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants

Office/Division/Branch: RES/DE/ICEEB
Technical Lead: Bernie Dittman

Staff Action Decision: Reviewed with issues identified for future consideration

1. What are the known technical or regulatory issues with the current version of the Regulatory Guide (RG)?

Regulatory Guide (RG) 1.209 references 10 CFR 50.55a(h), therefore, the revision should wait until the revised 10 CFR 50.55a(h) regulation is published, which should be late 2013 or the first half of 2014.

Also, on the basis of changes being proposed for IEEE Std 7-4.3.2 with regard to increasing its scope of the standard to address all programmable digital devices instead of just computer-based systems, RG 1.209 should be revised to apply to programmable digital devices instead of just microprocessor based systems. Given these impending changes to IEEE Std 323, 10 CFR 50.55a(h), and IEEE Std 7-4.3.2, RG 1.209 would not be published until late 2014.

To ensure the RG will be current with the next revision of IEEE Std 323, the NRC should continue to be represented in the NPEC SC 2.1 working group to capture proposed changes in the draft RG 1.209 as they are drafted into the next version of IEEE Std 323. After the IEEE Std 323 standard is balloted, the NRC can make the final edits to the draft RG to bring it into conformance with the standard (after balloter comments are incorporated). This will result in a timely publication of the RG nearly coincident with publication of the standard.

2. What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of anticipated numbers of licensing and inspection activities over the next several years?

The current RG 1.209 will remain valid through this period of waiting for the next revisions of IEEE Std. 323, 10 CFR 50.55a(h), and IEEE Std 7-4.3.2. The impact, therefore, is minimal.

3. What is an estimate of the level of effort needed to address identified issues in terms of full-time equivalent (FTE) and contractor resources?

NRC support of the IEEE Std 323 development will require approximately 0.1 FTE. NRC support effort for developing 10 CFR 50.55a(h) is absorbed by other funding sources. Support for development of IEEE Std 7-4.3.2 is through funding support for the development of that standard.

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4. **Based on the answers to the questions above, what is the staff action for this guide (Reviewed with no issues identified, Reviewed with issues identified for future consideration, Revise, or Withdraw)?**

Reviewed with issues identified for future consideration.

5. **Provide a conceptual plan and timeframe to address the issues identified during the review.**

The RG should be revised no earlier than the publication of the next revision of IEEE Std. 323, which should be in the last half of 2014 (the IEEE PAR expires in December 2013).

NOTE: This review was conducted in June 2013 and reflects the staff's plans as of that date. These plans are tentative and are subject to change.