

November 29, 2006

MEMORANDUM TO: Douglas W. Weaver, Chief
New Reactor Infrastructure and Planning Branch
Division of New Reactor Licensing

FROM: Patrick Hiland, Director */RA/*
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: TRANSMITTAL OF PROPOSED REVISION TO STANDARD REVIEW
PLAN NUREG-0800 SECTION 3.11, REV. 3, "ENVIRONMENTAL
QUALIFICATION OF MECHANICAL AND ELECTRICAL EQUIPMENT"

The purpose of this memorandum is to transmit the proposed revision to NUREG-0800, Standard Review Plan (SRP), Section 3.11, Rev. 3, "Environmental Qualification of Mechanical and Electrical Equipment" to you for consideration. This document is technically complete, reformatted in conformance with LIC-200, and may be designated "publically available."

In accordance with the staff requirements memorandum dated May 10, 2005, on the April 6, 2005, Commission meeting the Office of Nuclear Reactor Regulation (NRR) has revised SRP Section 3.11 (Enclosure). The revised technical portions of the SRP section have been highlighted to aid in identifying the technical information that has been added or revised as part of the 2006 update.

The present revision updates the July 1981, Revision 2. Changes introduced in the 1996 draft have been affirmed and are included in this revision, with the following exceptions:

- Reference to NUREG-0588, Category II equipment was not deleted from SRP Section 3.11 since there are still plants operating that use this as their licensing basis.
- Reference to equipment qualified life being based on the proposed licensing period was not added since qualified life is not determined by the licensing period of the plant.

Several specific changes from the 2006 update are worth noting:

1. Included 10 CFR 50.34(f)(2)(ix) regarding environmental qualification of equipment to accommodate hydrogen burning and post-accident inerting as a separate line item in the list of regulations to be met under Acceptance Criteria.

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2. Included 10 CFR 50.67 for accident source term, as it relates to environmental qualification, as a separate line item in the list of regulations to be met under Acceptance Criteria, and added a discussion of this regulation in the list of specific criteria.
3. Added a discussion of Regulatory Guide 1.130 for guidance on meeting the quality assurance requirements for instrumentation and electric equipment.
4. Added a discussion of Regulatory Guide 1.180 for guidance on qualifying digital and advanced analog systems for the projected electromagnetic environment.
5. Added a discussion of Regulatory Guide 1.183 for guidance on developing integrated doses for environmental qualification purposes for plants using alternative source terms.
6. Added a discussion to address the concerns identified in IN 97-45 and IN 97-45S1 with regard to qualification of cables and penetration pigtailed for high-range radiation monitors.
7. Added a discussion to address IN 89-63 with regard to equipment wetting concerns for equipment installed above the flood level.
8. Added a discussion to address the concerns raised in IN 98-21 with regard to evaluation of EQ results for cable/connection systems.

Additional changes are summarized at the end of the SRP section revision.

In addition, this revision has been administratively updated in accordance with NRR Office Instruction, LIC-200, Standard Review Plan Process. The administrative update is comprised of assigning the review responsibilities by function, with the responsible organizations maintained separately from the SRP itself to minimize impacts of office reorganizations, and editorial and formatting changes. The revision also adds standard paragraphs to extend application of the updated SRP section to prospective submittals by applicants pursuant to 10 CFR Part 52.

The staff has determined that the changes do not involve any new staff positions. I understand, that most of the SRP sections will be issued as final versions without publishing them as draft and requesting comment. The staff is revising the SRP in this manner to provide a more up-to-date SRP in light of the requirement in 10 CFR 50.34(h) for an applicant to evaluate its facility against the SRP revision in effect six months before the docket date of the application. In addition, this memo and its enclosure will be made publicly available as a preliminary SRP section revision. It will be formally published following reconciliation against the ongoing Part 52 rulemaking and regulatory guide updates including DG-1145, "Combined License Applications for Nuclear Power Plants (LWR Edition)." After formal issuance, the SRP will be available for public comment. Comment resolution will be addressed in subsequent SRP revisions. Prior to revision to individual sections, comment resolution may establish a basis for how alternatives to the NUREG-0800 acceptance criteria provide an acceptable method of complying with the NRC's regulations.

Douglas W. Weaver

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For questions concerning this document, please contact Amar Pal at 301-415-2760 or Chau (John) Nguyen at 301-415-1177.

Enclosure:
As stated