



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

ACRSR-2049

September 24, 2003

The Honorable Nils J. Diaz
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: DRAFT FINAL REVIEW STANDARD FOR EXTENDED POWER
UPDATES, RS-001

Dear Chairman Diaz:

During the 505th meeting of the Advisory Committee on Reactor Safeguards, September 10-13, 2003, we met with representatives of the NRC staff to discuss the draft final Review Standard for Extended Power Updates, RS-001, that was prepared as indicated in SECY-02-0106. We also had the benefit of the documents referenced.

RECOMMENDATION AND CONCLUSION

1. The Review Standard should be released for use in review of future applications for extended power updates.
2. We commend the staff for the development of an excellent review standard.

DISCUSSION

Power updates have been of three general magnitudes: (1) measurement uncertainty recapture of 1 to 2 percent, (2) stretch updates up to about 7 percent, and (3) extended power updates up to 20 percent. This Review Standard is intended only for use in review of extended power update applications. The staff has assigned update reviews a high priority and considers them to be among the most significant current licensing actions. We agree with this assessment and reiterate our view that a Review Standard is essential for maintaining efficiency and thoroughness of the review process. In addition, the Review Standard can facilitate the transfer of knowledge from one generation of reviewers to the next through lessons learned, critiques, feedback, and future updates.

In several letters related to update applications, we recommended that the staff develop a Standard Review Plan for update reviews. These recommendations arose from our concerns about: (1) the potential for synergistic effects when updates are combined with other plant licensing actions, (2) potential safety margin reductions, and (3) the adequacy of agency update review procedures. The staff documented a plan for update reviews in SECY-02-0106 dated June 14, 2002. In this document, the staff committed to prepare a review standard that would include: (1) a clear definition of the review scope, (2) references to existing review criteria, and (3) template BWR and PWR safety evaluations.

During our review, we identified two concerns. First, there was considerable variation from section to section in the requirements for independent calculations. Some sections even went so far as to state that independent calculations were not expected. This concern was resolved in the final standard by establishing guidance for when independent calculations are appropriate. Our second concern was that the criteria for integral system transient testing were vague. We agree with the final staff position that integral system transient testing should be performed unless licensees can provide an adequate justification for not performing them.

We have expressed a concern about synergistic or compounding effects of uprates with other regulatory actions. While such effects are difficult to identify explicitly, the application of the Review Standard will help call attention to such effects. This is particularly true for areas with materials concerns where flow accelerated corrosion, fluid structure interaction, fatigue, and stress corrosion cracking can interact and shorten component life.

Sincerely,

/RA/

Mario V. Bonaca
Chairman

References:

1. Memorandum dated August 1, 2003, from Ledyard B. Marsh, Office of Nuclear Reactor Regulation, NRC, to John T. Larkins, ACRS/ACNW, transmitting Review Standard RS-001, "Review Standard for Extended Power Uprates," with public comments, ACRS Comments, and SRP Sections.
2. Memorandum dated July 9, 2001, from William D. Travers, Executive Director for Operations, NRC, for the Commissioners, SECY-01-0124, Subject: Power Uprate Application Reviews.
3. Memorandum dated December 20, 2001, from Annette L. Vietti-Cook, Secretary of the Commission, to John T. Larkins, ACRS, Subject: Staff Requirements - Meeting with ACRS December 5, 2001.
4. Memorandum dated June 14, 2002, from William D. Travers, Executive Director for Operations, NRC, for the Commissioners, SECY-02-0106, Policy Issue Information, Subject: Review of ACRS Recommendation for the Staff to Develop a Standard Review Plan for Power Uprate Reviews.