

January 28, 2003

Dr. Mario V. Bonaca, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**SUBJECT: DRAFT FINAL AMERICAN NUCLEAR SOCIETY EXTERNAL EVENTS
PROBABILISTIC RISK ASSESSMENT METHODOLOGY STANDARD**

Dear Dr. Bonaca:

The Committee's letter of December 20, 2002, made the following key observations regarding the subject ANS Standard.

- The ANS Standard defines requirements for three probabilistic risk assessment (PRA) "capability categories" that differ in terms of their level of resolution, conservatism, and use of site-specific data. Requirements for each of the capability categories are quite similar and even identical in many cases. Consequently, the requirements require interpretation to ascertain the capability category. Standards for PRAs take the form of guidance and not prescriptive analytic methods typical of other engineering standards. It is unlikely, therefore, that completely reproducible peer review evaluations of the capability categories could be derived from the ANS Standards or any other PRA standard.
- The ANS Standard does not address seismically induced fires. ANS is currently working on a standard for fire PRA. The interface between the fire PRA and external events PRA will need attention.
- The ANS Standard includes materials describing and setting requirements for the seismic margins methods of plant analysis.

The staff concurs with the Committee's observation that the PRA standards take the form of guidance, unlike typical engineering standards which contain prescriptive analytic methods. The staff is mindful of the subjective interpretations required by a PRA standard and, therefore, has paid special attention to the peer review requirements during its review of the standards. The staff has and will continue to pay special attention in the development of the regulatory guidance for both the applicant and staff in dealing with the subjective elements to establish as much uniformity as possible.

The staff agrees that seismically induced fires must be considered in risk assessments. During staff's review of the ANS standard for fire PRA under preparation, staff will make sure that the subject of seismically induced fires is addressed and the interfaces between the fire and external event standards, such as walkdown requirements, are clearly defined.

Dr. Bonaca

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With regard to the seismic margin methods, the staff had also noted in its comments on the draft ANS Standard that it was necessary to clearly articulate applicability and limitations of the margin methods. The ANS Standard includes examples of types of issues that can be addressed by the margin methods. The Standard further describes approximate ways to develop additional PRA-type insights from the margin results. The staff believes that the margin methods can be used for certain risk-informed decisions since they have been derived from seismic PRA insights as demonstrated by their use in the Individual Plant Examination for External Events (IPEEE) program. However, the applicability of margin methods is limited compared to a thorough PRA. The staff plans to address this issue in its regulatory guidance development.

Staff wishes to thank the Committee for its ongoing review of the PRA standards. Both the standard writing groups and the staff have benefited from the Committee's insights in developing the standards and regulatory guidance.

Sincerely,

/RA/

William D. Travers
Executive Director
for Operations

cc: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
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SECY

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