

November 7, 2003

Dr. Mario V. Bonaca  
Chairman  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: DRAFT FINAL REGULATORY GUIDE x.xxx, "AN APPROACH FOR DETERMINING THE TECHNICAL ADEQUACY OF PROBABILISTIC RISK ASSESSMENT RESULTS FOR RISK-INFORMED ACTIVITIES" (FORMERLY DG-1122)

Dear Dr. Bonaca:

On September 11, 2003, the NRC staff presented to the Advisory Committee on Reactor Safeguards (the Committee) its intention to publish Draft Final Regulatory Guide (RG) x.xxx (formerly DG-1122), "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," as a regulatory guide for trial use, and requested the Committee's concurrence. In your letter dated September 22, 2003, several recommendations and conclusions are provided. Overall, the staff agrees with the Committee and the staff's response to the recommendations and conclusions are provided below.

- (1) ACRS Recommendation/Conclusion: "The draft final Regulatory Guide should be issued for trial use with an appropriate sample of pilot plants." Further, the Committee notes that "During our meeting with the staff, we made several suggestions for improving some of the language of the guide, in particular the definition of the term 'significant.' The staff should consider those suggestions before issuing this guide."

Staff Response: The staff agrees with the Committee. Currently, only South Texas has submitted a formal request as a pilot for this RG. However, NEI has indicated that another possible six licensees may be interested to serve as pilots which would provide both a good sampling and a more thorough testing of the RG.

At the September 22 meeting, the Committee provided the following suggestions to the RG:

- Clarification of certain definitions (i.e., significant, key source of uncertainty)
- Clarification on the guidance provided in Section 1.2.1 on parameter estimation analysis.

The staff has incorporated these clarifications in the RG.

- (2) ACRS Recommendation/Conclusion: "We agree with the staff's decision to develop a separate regulatory guide on how to perform sensitivity and uncertainty analyses." The Committee further notes that "We were told by the staff that this guide may be available for our review in early 2004. We look forward to reviewing it. . . . The assessment of uncertainties should include model uncertainties. Such uncertainties may be very large in some cases and may affect the PRA results and insights in a way that could impact the relevant decisionmaking process. If these uncertainties are not addressed explicitly, their magnitude and potential impact may not be fully appreciated and, thus the decisionmaking process may not be truly risk informed."

Staff Response: We agree with the Committee's concern regarding the potential impact of model uncertainties. The ASME Standard explicitly requires that model uncertainties be addressed. For example, the high level requirement in the standard states that "Uncertainties in the PRA results shall be characterized. Key sources of model uncertainty and key assumptions shall be identified, and their potential impact on the results understood." In regard to a new regulatory guide (or a NUREG) on sensitivity and uncertainty analyses, it is the staff's intention to interact with all stakeholders during its development and we expect to have a preliminary draft to provide to the Committee in early 2004.

- (3) ACRS Recommendation/Conclusion: "Inadequate PRA scope and quality may significantly affect regulatory decisionmaking." Further, the Committee notes that "Although our recommendations for PRA improvements are always motivated by our desire to have robust regulatory decisions, we note that enhanced confidence in PRA quality contributes to the agency's performance goal of increasing public confidence in NRC regulatory processes."

Staff Response: We agree with the Committee. In particular, we agree that enhanced confidence in PRA quality will increase public confidence in NRC's regulatory processes.

The staff will issue this RG for trial use. It is the staff's intent to interact with all stakeholders during the trial use period. The staff will keep the Committee informed regarding insights, lessons learned, and what changes will be proposed to the RG after this initial trial use period.

Sincerely,

***/RA William F. Kane Acting For/***

William D. Travers  
Executive Director  
for Operations

cc: Chairman Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
SECY

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Executive Director  
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\* see Previous Concurrence

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