

May 8, 2009

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

SUBJECT: DRAFT FINAL REVISION 2 TO REGULATORY GUIDE 1.200, "AN APPROACH FOR DETERMINING THE TECHNICAL ADEQUACY OF PROBABILISTIC RISK ASSESSMENT RESULTS FOR RISK-INFORMED ACTIVITIES"

Dear Dr. Bonaca:

Thank you for your letter dated April 9, 2009, that provides the views of the Advisory Committee on Reactor Safeguards (ACRS) on Draft Final Revision 2 to Regulatory Guide (RG) 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities." The staff's responses to the Committee's recommendations are provided below.

1. ACRS Recommendation: We agree with the staff's issuance of Revision 2 to RG 1.200.

Staff Response: The staff has published Revision 2 to RG 1.200.

2. ACRS Recommendation: The existing guidance on how to perform probabilistic risk assessments (PRAs) for nuclear power plants should be updated. The Committee further notes that although the national consensus PRA standards provide specific guidance on what the risk assessment should include, "the existing guidance on how to perform PRA is spotty. NUREG-6823 provides guidance on current methods for parameter estimation. NUREG-0492, 'Fault Tree Handbook,' is an excellent resource but should be updated to include refinements in fault tree analysis and associated computer codes. NUREG/CR-2300, 'PRA Procedures Guide, A Guide to the Performance of Probabilistic Risk Assessments for Nuclear Power Plants' is archaic; updated guidance for the broad range of PRA activities is sorely needed. Enhanced confidence in PRA increases the quality of risk-informed regulatory decisionmaking. Updating the PRA Procedures Guide and other PRA guidance documents is an important step in that process."

The Committee also notes that in their February 23, 2009, letter on NUREG-1855 they "commented that although NUREG-1855 provides good guidance for the identification of sources of model uncertainty, it lacks guidance on quantification of model uncertainty. We recommended that the staff develop methods for the quantification and integration of model uncertainties in risk-informed decisions."

Staff Response: With regard to additional PRA guidance, the staff has initiated an effort to review PRA guidance documents including the PRA Procedures Guide, NUREG/CR-2300, and the Fault Tree Handbook, NUREG-0492, with a view to determining what PRA guidance needs to be developed or updated. Part of this

assessment will evaluate whether the identified guidance is better suited to be developed as a staff effort, as part of an industry collaborative effort, as a separate industry effort, or as a separate national consensus standard effort. The staff notes that, in addition to NUREG-1855, it has already published several guidance documents on specific topics such as parameter estimation (NUREG/CR-6823), human reliability analysis (NUREG-1792 & NUREG-1842) and fire PRA (NUREG/CR-6850).

This effort is in keeping with the staff plan in achieving the Commission's phased approach to PRA quality (SECY-04-0118 and SECY-070042, ML041470505 and ML063630346, respectively), which includes identification and development of guidance documents for achieving the needed PRA quality for risk-informed activities. Moreover, with regard to guidance on quantification of model uncertainty, as noted in the April 14, 2009, staff response (ML090920755) to the ACRS letter of February 23, 2009, the staff plans to pursue the feasibility and benefit of developing such guidance.

The staff plans to continue to interact with the Committee as these guidance documents are identified and developed.

Sincerely,

*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

cc: Chairman Klein  
Commissioner Jaczko  
Commissioner Lyons  
Commissioner Svinicki  
SECY

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