

May 20, 2008

Dr. William Shack, Chairman  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: SEQUENCE SELECTION APPROACH FOR THE STATE-OF-THE-ART  
REACTOR CONSEQUENCE ANALYSES PROJECT

Dear Dr. Shack:

We appreciate your letter of April 21, 2008, reiterating the Advisory Committee on Reactor Safeguards' (ACRS or the Committee) concern regarding selecting accident sequences for our state-of-the-art reactor consequence analyses (SOARCA). To address this concern, the staff met with several members of the Committee on May 8, 2008. As a result of the meeting, the staff understands that the two main concerns the Committee has with the SOARCA methodology are: (1) assuring that the methodology does not inadvertently or otherwise omit high consequence sequences that are of lower frequency than the cut off frequency; and (2) clear presentation of the SOARCA approach and results to both internal and external stakeholders.

As you are aware, the main goal of SOARCA is to develop a more realistic, state-of-the-art evaluation of severe accident progression, radiological releases, and offsite consequences for dominant accident sequences. Therefore, the staff applied a cut off frequency to focus the study on those dominant accident sequences. Although SOARCA was not meant to be a risk study, while completing the analyses for Surry and Peach Bottom, the staff has used available risk insights to complement the cut off frequency in identifying dominant accident sequences. We recognize that it is incumbent upon the staff to provide the ACRS with the information necessary to clearly articulate and document the SOARCA considerations and approach, and to present the results in the most understandable fashion for the different stakeholders.

Per your letter and the subsequent discussion, the staff plans to investigate what industry-developed level-3 probabilistic risk assessments are available, or explore other methods that

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could be used to clarify the SOARCA methodology. The staff will also use insights from this activity to help properly and clearly communicate the results of SOARCA.

Sincerely,

*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

cc: Chairman Klein  
Commissioner Jaczko  
Commissioner Lyons  
Commissioner Svinicki  
SECY

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SECY

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