

September 3, 2002

Dr. George E. Apostolakis, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

SUBJECT: RISK METRICS AND CRITERIA FOR REEVALUATING THE TECHNICAL
BASIS OF THE PRESSURIZED THERMAL SHOCK RULE

Dear Dr. Apostolakis:

Your letter of July 18, 2002, observed that the current staff work to identify risk metrics and criteria that can be used for reevaluating the technical basis of the pressurized thermal shock (PTS) rule does not properly reflect the potential impact of an air-oxidation source term on risk (and the risk acceptance criteria). The letter also noted that the Committee believes the acceptance criteria should be based on consideration of large early release frequency and not on core damage frequency, and that, if the consideration of an air-oxidation source term is too daunting and subject to unacceptable uncertainty, it may be necessary to fall back on a frequency-based approach to identify [acceptance] criteria. Finally, the letter noted that the Committee believed consideration of containment failure and the air-oxidation source term could result in lower acceptance criteria than that now being considered by the staff.

The staff agrees that the issue of an air-oxidation source term could influence the acceptance criteria. In addition, as noted in SECY-02-0092, there are other issues related to the post-RPV failure and accident progression analysis that the staff will be studying further over the next few months. This study is expected to be completed by December 2002. The staff intends to assess, in a scoping manner, the net implications of the set of issues described in SECY-02-0092. As indicated in our December 14, 2000, letter, we had planned to complete some of the scoping studies earlier in the program; however, the focus of the staff effort was shifted to completing the plant analysis and estimating through-wall cracking frequencies by December 2002. The results of the assessment are intended to provide the staff with a better technical basis with respect to possible acceptance criteria.

The staff will contact the ACRS staff to arrange subcommittee briefings on its work on this set of issues.

Sincerely,

/RA by William F. Kane Acting For/

William D. Travers
Executive Director
for Operations

cc: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield
SECY

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