



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 27, 2017

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

SUBJECT: CONSEQUENTIAL STEAM GENERATOR TUBE RUPTURE

Dear Dr. Bley:

I am writing in response to your letter of May 19, 2017 (Agencywide Documents Access and Management System Accession No. ML17138A017), in which the Advisory Committee on Reactor Safeguards (ACRS or the Committee) reported on its review of draft NUREG-2195, "Consequential SGTR Analysis for Westinghouse and Combustion Engineering Plants with Thermally Treated Allow 600 and 690 Steam Generator Tubes." The letter includes the following conclusions and recommendations:

1. NUREG-2195 should be published. The methods documented in this report have advanced the state-of-the-art for evaluating phenomena that contribute to consequential failures of steam generator tubes, which can be significant contributors to risk of offsite radionuclide releases.
2. These methods show that the vulnerability to consequential steam generator tube rupture depends on plant-specific design and operations.
3. NUREG-2195 methods should be applied in plant-specific risk assessments. Such evaluations should explore opportunities for mitigation strategies to reduce the potential for bypass accidents with offsite release of radionuclides from the reactor coolant system.

The staff of the U.S. Nuclear Regulatory Commission appreciates the time and effort the ACRS has devoted to reviewing NUREG-2195. The staff is especially appreciative of the insights provided by the Committee. In addition to documenting the analyses performed by the staff, NUREG-2195 also provides a method for developing a simplified risk assessment related to the Consequential Steam Generator Tube Rupture (C-SGTR) phenomena. We agree that the method as described in this NUREG can be used to assess the probability of C-SGTR and large early release frequency (LERF) for two pressurized-water reactor designs with U-tube steam generators.

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In response to recommendation 1, the staff is taking the necessary steps to publish NUREG-2195 in the near future.

The staff agrees with your second conclusion. The analysis in the NUREG was performed on two pressurized water reactor designs, a four-loop Westinghouse plant and a two-loop Combustion Engineering plant, and the NUREG concluded that the vulnerability to C-SGTR depends on plant-specific design, operation, and reactor coolant system geometry.

In response to recommendation 3, the staff plans to update the Risk Assessment Standardization Project (RASP) Handbook chapter to incorporate the findings of NUREG-2195. Where applicable, this update will help the staff apply NUREG-2195 methods in plant-specific risk assessments.

Sincerely,

/RA Frederick D. Brown for/

Victor M. McCree
Executive Director
for Operations

cc: Chairman Svinicki
Commissioner Baran
Commissioner Burns
SECY

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OEDO-17-00346

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