

December 7, 2012

Dr. J. Sam Armijo, Chairman  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: LONG-TERM CORE COOLING FOR THE SOUTH TEXAS PROJECT  
ADVANCED BOILING WATER REACTOR COMBINED LICENSE  
APPLICATION

Dear Dr. Armijo:

I am writing in response to the letter from the Advisory Committee on Reactor Safeguards (ACRS), dated November 7, 2012. The letter addressed the U.S. Nuclear Regulatory Commission (NRC) staff's evaluation regarding the adequacy of long-term cooling for the Advanced Boiling Water Reactor as contained in the staff's safety evaluation (SE) for the combined license application (COLA) for South Texas Project Units 3 and 4 (STP 3 and 4). The ACRS discussed the staff's evaluation during its 599th meeting November 1–3, 2012. The ACRS Advanced Boiling-Water Reactor Subcommittee previously had met to discuss technical aspects of the combined license and the staff's safety evaluation on the following dates: June 23-24, 2010; March 8, June 21, and October 4, 2011; and October 2, 2012.

The ACRS's letter included the following conclusion and recommendations:

**Conclusion:** Long-term core cooling for design-basis conditions for STP 3 and 4 will be adequately met pending successful resolution of the downstream effects test program.

**Staff Response:** The staff appreciates the Committee's efforts and agrees with its conclusion. The staff's evaluation will be documented in its Final Safety Evaluation Report related to the STP 3 and 4 COLA. The license conditions will ensure that all appropriate testing is completed before fuel loading.

**Recommendation 1:** The downstream effects testing program is based on the applicant's commitment to maintain low levels of fibrous materials and other deleterious materials in the containment. Any future relaxation of these cleanliness requirements would have to be addressed by additional test data and associated analysis.

**Staff Response:** The staff agrees with the recommendation of the Committee.

**Recommendation 2:** While STP has committed to use test procedures and protocols consistent with current industry practice at the time of the tests, the Committee wants to review the STP downstream fuel effects test procedure before testing.

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**Staff Response:** The staff agrees with the recommendation of the Committee. The license conditions will require the applicant to provide the detailed test procedure at least 6 months before performing the tests.

We thank the ACRS for its time and its valuable input, and we look forward to working with the Committee in the future.

Sincerely,

***/RA by Michael R. Johnson for/***

R. W. Borchardt  
Executive Director  
for Operations

cc: Chairman Macfarlane  
Commissioner Svinicki  
Commissioner Apostolakis  
Commissioner Magwood  
Commissioner Ostendorff  
SECY

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