



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

May 25, 1988

Docket nos. 50-327/328

Mr. S. A. White  
Manager of Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: QUALIFICATION TESTING OF INSTALLED SILICONE RUBBER INSULATED IN  
CONTAINMENT (TAC NOS. R00332, R00333)

This is in response to your letters dated February 29 and March 14, 1988 regarding qualification of the silicone rubber insulated cables at Sequoyah for the full 40 year life of the plant.

In a letter dated December 28, 1987, TVA documented its basis for concluding that the silicone rubber insulated cables installed in the containments at Sequoyah Units 1 and 2 are adequate to perform their intended function for a 10 year period following original installation. TVA also informed the staff that all AIW cables in Unit 2 containment in safety-related harsh environment applications, and the Anaconda and Rockbestos cables mixed in the same conduits with AIW cable, have been replaced. The staff reviewed the TVA data and concluded that the Wyle Laboratory qualification tests of the Anaconda and Rockbestos cables and the replacement of the AIW cable inside the Unit 2 containment provides adequate assurance of the integrity of cable installation at Sequoyah Unit 2 to allow the restart of that Unit. However, you committed to qualify the remaining installed silicone rubber insulated cables in containment for the expected life of Sequoyah before Unit 2 returns to service from the Unit 2 Cycle 3 refueling outage. This schedule is acceptable to the staff but the staff would like to clarify the details of the tests.

Your letters did not provide details regarding methods of sample selection and testing of the silicone rubber insulated cable. The following are the NRC staff's views on the content of an acceptable program to demonstrate the full qualified life of silicone rubber insulated cables for use in containment at Sequoyah Units 1 and 2. The full life test should be based on cable similar to that which is now actually installed in the containments at Sequoyah. The cable samples to be tested should be removed from the containments at either Sequoyah or Watts Bar since the cable installation practices at both sites were determined to have been the same. The cable samples should be selected from worst case conduit configurations and a minimum of five separate cables from each manufacturer should be tested (five AIW, five Rockbestos and five Anaconda).

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The five cables of each manufacturer should be drawn from five separate conduits. If a conduit contains cables from more than one manufacturer, one cable from each manufacturer may be drawn from a single conduit. Of course, if TVA decides to remove all the AIW cables from the Unit 1 containment, no testing of AIW cables would be required.

The cable tests should be conducted in a manner similar to those previously conducted at Wyle Laboratories, but cable samples should be tested in their removed condition without artificially thinning of insulation wall thickness.

Within 30 days of the date of this letter, please confirm your commitment to conduct the necessary tests in accordance with the above views or provide an alternative approach and a justification for such an approach.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Original Signed by

Stewart D. Ebnetter, Director  
Office of Special Projects

cc: See next page

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May 25, 1988

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