TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

December 9, 1982

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

In response to a verbal request from Carl Stahle of your staff in a December 9, 1982 telephone conversation, enclosed is additional information regarding equipment survivability at the Sequoyah Nuclear Plant. This information is being provided to revise the information provided in L. M. Mills' November 29, 1982 letter to you.

If you have any questions concerning this matter, please get in touch with Jerry Wills at FTS 858-2683.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

D S Kammer

D. S. Kammer
Nuclear Engineer

Sworn to and subscribed before me
this 9th day of Dec. 1982

Bryant M. Lowery
Notary Public
My Commission Expires 4/8/86

B021

Enclosure
cc: U.S. Nuclear Regulatory Commission (Enclosure)
Region II
ATTN: James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

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ENCLOSURE

RESPONSE TO NOVEMBER 19, 1982 VERBAL REQUEST
FOR ADDITIONAL INFORMATION ON EQUIPMENT SURVIVABILITY

This response provides additional information regarding equipment survivability at the Sequoyah Nuclear Plant and is intended to supplement the information provided in the Tennessee Valley Authority's November 1, 1982 submittal on the same subject. As agreed per our November 19, 1982 telephone conversation, clarification of the following items is provided; (1) hydrogen recombiners; (2) Barton transmitters; (3) core exit thermocouples; (4) H_2 sample flow control valves; and (5) bounding conditions. Hydrogen recombiners and reactor coolant pressure transmitters will be included as essential equipment required for the hydrogen burn event based on NRC requirements.

Hydrogen Recombiners:

Survivability of the hydrogen recombiners is discussed in supplement 5 to the Sequoyah Safety Evaluation Report (NUREG-0011). The recombiners are included in the NUREG-0588 qualification program and have been qualified to 309°F. The Summary Component Evaluation Worksheets (SCEWs) for the hydrogen recombiners are provided on page 13 of table 3.11-4 in TVA's Electrical Equipment Qualification Report for unit 1 at Sequoyah.

Barton Level and Pressure Transmitters:

Barton transmitters are utilized to determine the pressure of the Reactor Coolant System (RCS) and are utilized for level transmitters LT 63-176 through 63-179. There are different lots of barton transmitters in use at the Sequoyah Nuclear Plant and all have been qualified to temperatures in excess of those anticipated due to hydrogen combustion. Lot 1 transmitters have been qualified to 280°F and are scheduled for replacement by the second refueling outage on each unit. Lot 3 and 4 transmitters are fully qualified for the Sequoyah NUREG-0588 program. All level and pressure transmitters on the list of equipment required to mitigate hydrogen burns are also included in the Sequoyah NUREG-0588 program.

Core Exit Thermocouples:

The core exit thermocouples are located entirely within the pressure vessel and are not exposed to hydrogen burning. An electrical penetration in the pressure vessel head is provided for the wiring.

H_2 Sample Flow Control Valves:

Flow control valves FCV 43-201, 202, 207, and 208 have been qualified to 340°F.

Bounding Conditions:

A listing of the equipment which must survive a hydrogen burn and the references for individual SCEWs required in the EQ response to NUREG-0588 was provided in the response to question 1 on TVA's November 1, 1982 submittal. The temperatures listed on the NUREG-0588 SCEWs (with the exception of the RTD and thermocouple cable temperatures) will bound equipment temperatures during hydrogen combustion for the events analyzed. TVA has reviewed the equipment qualification test program, and the tests are conducted for extended periods of time. Equilibrium surface temperatures of equipment tested achieve thermal equilibrium with the test chamber during the test.