TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

May 22, 1984

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 the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

Please refer to my letters to you dated March 20 and April 5, 1984 which provided TVA's responses to the audit finding identified during the February 14-16, 1984 NRC audit of the Watts Bar Nuclear Plant electrical equipment qualification program.

The March 20, 1984 TVA letter indicated that additional time would be required for submitting responses to several of the audit findings due to their scope and/or nature. By the April 5, 1984 letter, TVA provided the responses to two of these findings. Enclosed are TVA's responses to the remaining items for which responses have not yet been provided.

If you have any questions concerning this matter, please get in touch with D. B. Ellis at FTS 858-2681.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Sworn to and subscribed before me
this 22nd day of May 1984

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

Enclosure
cc: U.S. Nuclear Regulatory Commission (Enclosure)
Region II
Attn: Mr. James P. O'Reilly Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

A048
1/1

ENCLOSURE

WATTS BAR NUCLEAR PLANT
OUTSTANDING ITEMS RESULTING FROM THE NRC AUDIT
OF TVA'S EQUIPMENT QUALIFICATION PROGRAM

Generic Item 6

NRC Question

TVA should request Westinghouse to document that demonstrated accuracy is acceptable for the applicable instrument for the Watts Bar design.

TVA Response

For the NSSS equipment Westinghouse (W) is performing a statistical setpoint study that will include the plant-specific accuracies. TVA is currently in the process of reviewing a draft version of the setpoint study being generated by (W). The final version of the setpoint study will be transmitted to the staff upon receipt and review by TVA. TVA anticipates submitting this study to the staff by July 6, 1984.

Component Specific - Terminal Blocks - EQS EEB-TB-1

NRC Question

4. Are terminal blocks subjected to submergence? If yes, how was the qualification for submergence determined.

TVA Response

TVA has identified terminal blocks located in the following junction boxes (JB) inside containment being subjected to submergence:

Unit 1	Loc(Az/El)	Unit 2	Loc(Az/El)
JB 394	41/703	JB 395	41/703
JB 691	213/703	JB 692	213/703

TVA has performed a failure evaluation to determine the effects of these submerged terminal blocks on associated class 1E equipment during an LOCA. The results of this evaluation indicate that the failure of these terminal blocks caused by a LOCA flood would not prevent class 1E equipment from performing its accident mitigation functions since the equipment in question if affected, at all, would go to its fail-safe or closed position. This conclusion is based on the following.

When power to the solenoids is removed from the above JBs via operator's handswitch (HS) or emergency signal, the power to the associated limit switches is still present in the JBs. Therefore, the supply to the limit switch could be shorted (due to the accident environment) to the positive side of the solenoid (possibly energizing the solenoid), which is the unsafe mode. However, in each case the supply to the limit switches is on the bottom of the terminal block (TB), the negative is in the center of the TB,

and the positive side of the solenoid on the top of the TB. In the event the environment is conductive enough for solenoid operation due to the limit switch supply (bottom of TB) shorting to the positive side of the solenoid (top of TB) the limit switch supply will short to the negative side of the circuit preventing solenoid operation. Therefore, the solenoid will remain deenergized, which is the safe mode.

The subject EQS will be revised and the qualification files updated appropriately.

Component Specific - Chicago Fluid Power - MSIV Actuator - EQS MEB-1-101

NRC Questions

1. What is the qualified life of the valve actuator, complete with solenoids and limit switch?

2a. Provide an analysis to show qualified life.

2h. Provide documentation that the test actuator is the same model or equivalent as the installed actuator.

TVA Response

1. The valve manufacturer has stated that these actuators are qualified for 40 years provided TVA maintains them as required by the manufacturer. This information is contained in A&M's letter to TVA dated May 7, 1984 and will be incorporated into the Watts Bar maintenance program to ensure that the components' qualification is maintained.

2a & 2h - These questions will be addressed by TVA in our upcoming Environmental Qualification Report.

Component Specific - Limitorque - EQS MEB-1-107

NRC Question

B2. Provide documentation listing if any operators contain Buchanan 0824 terminal blocks (reference IE IN 83-72).

TVA Response

B2. TVA has performed an inspection of 23 selected Limitorque operators. These Limitorque operators were located inside the annulus and primary containment and included the Essential Raw Cooling Water, Safety Injection, Chemical Volume Control, Condenser Circulating Water, and Containment Spray Systems. One Limitorque operator (Safety Injection System, FCV-65-73) was found to contain a Buchanan terminal block. As a result, TVA will expand the scope of its inspections and will provide information on the findings by June 27, 1984.