

**TENNESSEE VALLEY AUTHORITY**

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

April 17, 1985

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 TVA's letter dated April 9, 1985 which, in part, responded to Power Systems Branch's concerns at the Watts Bar Nuclear Plant (WBN). During a subsequent April 10, 1985 meeting held between TVA and NRC representatives, TVA agreed to provide the enclosed proposed final safety analysis report (FSAR) section 8.2.1 change which clarifies our position on testing of the transfers to the alternate power supplies on the 6.9-kV shutdown boards. As stated in our April 9 submittal, TVA believes that the requirements of 10 CFR 50 Appendix A, General Design Criteria 17 are satisfied by ensuring the first alternate supply to the 6.9-kV shutdown boards via the common station service transformers C or D is available. Therefore, the technical specifications should not require testing of the automatic or manual transfer of the 6.9-kV shutdown boards to their second alternate supply. The enclosed FSAR change will be incorporated into a future FSAR amendment.

Additionally, during an April 12, 1985 meeting with the Staff, the issue concerning the potential loss of both independent offsite circuits due to a faulted 6.9-kV shutdown board was discussed and resolved. Although TVA believes that this scenario is incredible due to the number of failures required (refer to our April 9, 1985 submittal), we committed to rack out the second alternate supply breaker to each 6.9-kV shutdown board in order to resolve this issue. This submittal documents that commitment. The FSAR changes associated with this commitment will be submitted in a subsequent FSAR amendment.

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Director of Nuclear Reactor Regulation

April 17, 1985

If you have any questions concerning this matter, please get in touch with K. Mali of my staff at FTS 858-2682.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*R. H. Shell*

R. H. Shell  
Nuclear Engineer

Sworn to and subscribed before me  
this 17<sup>th</sup> day of April 1985

*Paulette H. White*

Notary Public

My Commission Expires 8-24-88

Enclosure

cc: U.S. Nuclear Regulatory Commission (Enclosure)  
Region II  
Attn: Dr. J. Nelson Grace, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

ENCLOSURE

PROPOSED FSAR CHANGE

boards, 6.9-kV RCP boards, and the associated 6.9-kV buses were procured in accordance with certain TVA standards and industry standards. TVA specifications require conformance of this equipment to such standards as the following. The overall construction, ratings, tests, service conditions, etc., are required to be in conformance to ANSI C37.20 and NEMA SD-5; the power circuit breakers are referenced to ANSI C37.4 through C37.9 and NEMA SG-4; associated relays are specified to conform to ANSI C37.1, instrument transformers to ANSI C57.13 and NEMA EI-2 and wiring to IPCEA S-61-402 and NEMA WCS.

The design of the equipment arrangement was also implemented to comply with GDC 3 for fire protection and with GDC 18 and Regulatory Guide 1.22 for each of periodic tests and inspections.

#### Criterion 18

General Design Criterion 18 requires that the offsite power circuits be designed to permit periodic inspection and testing to show:

- a. 'The operability and functional performance of the components' of the circuits,
- b. The operability of the circuits as whole systems, and
- c. 'Under conditions as close to design as practical, the full operation sequence that brings the system into operation.'

The offsite power system has been designed to permit appropriate periodic inspection and testing. Transfers from the normal supply to preferred (offsite) supply or between the preferred circuits may be manual or automatic. Testing of these transfers while the nuclear unit is at power could result in transients that could cause tripping of the reactor or turbine. For this reason, testing of the manual and automatic sequence will be performed ~~at intervals defined in the technical specifications~~ by causing a transfer from the normal supply to the first alternate (preferred) supply, from the normal supply to the second alternate (preferred) supply, and from the first alternate (preferred) supply to the second alternate (preferred) supply.

#### 8.2.2 Analysis

Each 161-kV circuit and its two associated transformers has sufficient capacity and adequate voltage to supply the essential

during shutdown conditions

Transfers from the normal to the first alternate supply is required to satisfy GDC 17 and will be tested at intervals specified in the technical specifications. Testing of the transfers