TENNESSEE VALLEY AUTHORITY
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NOV 05 1990

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

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

WATTS BAR NUCLEAR PLANT (WBN) - SUPPLEMENTAL INFORMATION FOR RESOLUTION OF NRC CABLE ISSUES COMMENTS

References:
1. Letter from TVA to NRC dated October 11, 1990, "Watts Bar Nuclear Plant (WBN) - TVA Responses to NRC Comments Resulting from August 1-3, 1990 Meeting"
2. October 10-11, 1990 site meeting between TVA and NRC
3. Teleconference between TVA and NRC on October 22, 1990

On October 11, 1990 (Reference 1), TVA submitted additional information to NRC regarding the methodologies employed to address cable issues at Watts Bar Nuclear Plant. The enclosed provides the supplemental clarifications requested by NRC (Reference 3) for resolution of the Cable Issues Corrective Action Program (CAP) Plan.

No new commitments are identified in this submittal.

NRC review and subsequent endorsement of the revised CAP are requested. Please direct any questions concerning this submittal to R. J. Stevens, WBN Site Licensing, at (615) 365-1550.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. G. Wallace, Manager
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Enclosure
cc: See page 2

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cc (Enclosure):

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ENCLOSURE

SUPPLEMENTAL INFORMATION FOR RESOLUTION OF
CABLE ISSUES CORRECTIVE ACTION PROGRAM (CAP)

1. CABLE PROXIMITY TO HOT PIPES (Enclosure 1, page 3)

BASIS FOR NORMAL AVERAGE TEMPERATURES PROVIDED ON THE ENVIRONMENTAL DATA DRAWINGS

The normal average temperatures utilized for the WBN hot pipe evaluations are based on the WBN environmental data drawings. The bases for these temperatures are documented in TVA calculations WBN-APS4-004[1] and TI-ECS-55.[2] Due to the similarities between Sequoyah Nuclear Plant (SQN) and WBN environmental control systems, room geometries, heat loads, boundary conditions, etc., the operating temperatures recorded at SQN during operation should be indicative of those temperatures expected for WBN. The temperatures on the WBN environmental drawings have been substantiated by a statistical analysis of actual surveillance temperatures obtained at SQN during operating conditions. Specifically, temperature data recorded for the SQN Auxiliary Building (Surveillance Instruction [SI]-606[3]) and for primary containment (SI-3[4]) during 1984 was compared to those temperatures indicated on the WBN environmental drawings. The results of the evaluation indicate that the highest average temperature for the Auxiliary Building spaces and for the containment upper compartment (78°F and 92°F, respectively) did not exceed the normal average temperatures indicated on the environmental drawings. The normal average temperatures indicated for the Auxiliary Building and the upper containment on the environmental drawings are 80°F and 100°F, respectively.

In addition, lower containment dead-ended compartment average temperatures are based on 4 1/2 and 3 years of actual SQN operational data (via SI-3) for Units 1 and 2, respectively. Results indicate an average temperature in the fan rooms and accumulator rooms of between 92°F and 104°F. The environmental data drawing indicates that 105°F is an average for these areas. Average temperatures for the pressurizer and steam generator compartments of 106°F to 108°F and 121°F to 134°F, respectively, were observed, while temperatures of 115°F and 135°F, respectively, are reflected on the environmental data drawings as the normal average temperatures for these areas.

The SQN data was recorded daily (once every eight hours) between the following times: 2300 to 0700, 0700 to 1500, and 1500 to 2300, and is representative of each season of the year, including peak temperatures recorded between July and August.

2. AMPACITY (Enclosure 2, page 7)

In accordance with the requirements of the National Electric Code (1987),[5] the second sentence of the second paragraph should read, ". . . for covers more than six feet in length."

ENCLOSURE

SUPPLEMENTAL INFORMATION FOR RESOLUTION OF
CABLE ISSUES CORRECTIVE ACTION PROGRAM (CAP)

3. SIDEWALL BEARING PRESSURE (SWBP) (Enclosure 1, page 5)

The Sidewall Bearing Pressure Calculation (No. WBPEVAR901001)[6] which documents the evaluation of the additional 40 randomly selected conduits has been issued. The results identified no cases where the allowable SWBP limits were exceeded. Accordingly, TVA has completed its analysis of SWBP at WBN. Implementation of the corrective actions identified will confirm that cables required for WBN Unit 1 operation have not experienced excessive SWBPs during installation.

FOOTNOTE REFERENCES:

1. WBN-AP54-004, "Summary of Mild Environment Conditions for Watts Bar Nuclear Plant"

2. TI-ECS-55, "Summary of Harsh Environment Conditions for Sequoyah and Watts Bar Nuclear Plants"

3. SQN-SI-606, "Balance of Plant - Temperature Monitoring System"

4. SQN-SI-3, "Daily, Weekly, and Monthly Logs"

5. National Electric Code, NFPA-70, 1987

6. TVA Calculation WBPEVAR901001, "Cable Issues - Cable Sidewall Bearing Pressure in Harsh Environments"