



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

MAR 10 1987

see Rep's

Docket Nos.: 50-390
and 50-391

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: Evaluation of Watts Bar Units 1 and 2 Cable Pulling and
Bend Radii Concerns

The enclosed Technical Evaluation Report (TER) on cable pulling and cable bend radii concerns for the Watts Bar Nuclear Plant Units 1 and 2 was prepared by the staff's consultants (Franklin Research Center). The TER evaluates TVA guides, procedures and practices for installing Class 1E cables to determine if significant abuse could have occurred to the cables during cable installation. The evaluation discusses significant differences between accepted industry practices and those employed by TVA at Watts Bar Nuclear Plant. The evaluation consisted of review of TVA guides, standards, inspection of worst-case cable/conduit systems and discussion on cable pulling with TVA engineering and installation personnel.

Although no outright cable damage could be identified during inspection, the evaluation of the Watts Bar cable installation indicated that damage to cables could have occurred from pull-bys, severe bending, jamming and tension through 90 degree condulets. Long term random and accident-related common mode failures of cables are possible for the above mentioned types of cable abuse. Conclusions and recommendations are made in the TER for further testing and evaluation of cables/conduits to assess whether significant damage has occurred.

The staff has reviewed the enclosed TER and agrees with its findings, conclusions and recommendations. Regarding the implementation of the recommended actions in the TER, the staff recommends that cable tests be conducted for assessing damage associated with pull-bys, jamming, severe bending and vertical

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Mr. S. A. White

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cable supported by 90 degree condulets at Watts Bar prior to the issuance of the operating license. In addition, the recommended modifications should be implemented by TVA before issuance of the operating license.

If you have any questions, contact Tom Alexion at (301)492-7386.

Sincerely,

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B. J. Youngblood, Director
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosure: As stated

cc: See next page

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Mr. S.A. White
Tennessee Valley Authority

Watts Bar Nuclear Plant

cc:

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