TENNESSEE VALLEY AUTHORITY
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5N 157B Lookout Place

March 19, 1986 A10:49

WBRD-50-390/85-54
WBRD-50-391/85-51

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

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - IMPROPER USE OF CABLES INSIDE CONTAINMENT - WBRD-50-390/85-54, WBRD-50-391/85-51 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Al Ignatonis on October 22, 1985 in accordance with 10 CFR 50.55(e) as NCR WBN 6302. Our first interim report was submitted on November 25, 1985. Enclosed is our second interim report. We expect to submit our next report on or about May 16, 1986.

Delay in submittal of this report was discussed with Bob Carroll on January 28, 1986 and with Dave Verrelli on February 28, 1986.

If there are any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. L. Gridley
Manager of Licensing

Enclosure
cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
IMPROPER USE OF CABLE INSIDE CONTAINMENT
WBRD-50-390/85-54, WBRD-50-391/85-51
NCR 6302
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

In 1979, TVA became concerned with the acceptability of silicone-rubber-insulated power and control cable provided by Anaconda-Continental Wire and Cable Corporation and designated for use in 1E circuits inside containment. The cable was purchased through contracts 74C7-85112 and 75C7-85861 and was acceptable to requirements effective at the time. However, with the advent of more definite accident requirements, questions were raised concerning the cables' ability to withstand the levels of radiation which could be present inside containment during a loss of coolant accident (LOCA). TVA identified the questionable qualification status of this type of cable through nonconformance report (NCR) EEB 79-6. Subsequently, measures were taken at the site to restrict the use of this cable by retagging the affected cable reels with class II labels (instead of class I).

NCR 6302 was written to identify that the labeling of the cable reels with class II labels was inadequate to prevent the cables' use in 1E circuits inside containment; that cable purchased through these two contracts had previously been found installed in class 1E circuits as identified in nonsignificant NCRs 2177R and 2316R; and that during housekeeping and storage inspections, 32 reels of this cable were found in the cable staging area, which had inconsistent identification (12 tagged as 1E, 18 tagged as class II, and 2 not tagged).

TVA has determined that the method employed to downgrade and control the use of this material was insufficient as the actions taken provided for the initial tagging of the material as "class II" while documentation at the site (bills of material, contract specification, etc.) continued to identify this material as class 1E. Over time, this resulted in reels of cable with missing identification tags being classified and retagged as class 1E.

Safety Implications

TVA assumes that any cable that is required for safe shutdown of the plant but not environmentally qualified in accordance with 10 CFR 50.49 will fail under accident conditions. As such, safe shutdown of the plant could be adversely affected due to the failure of such cable and the subsequent failure of safety-related components.

Interim Progress

Since issuance of NCRs EEB 79-6 and 6302, the silicone rubber cable from contracts 74C7-85112 and 75C7-85861 was retested by Wyle Laboratories for TVA and documented in Test Report 17733-1 Revision A. The testing performed exposed the cable to environmental parameters postulated for most applications inside containment at Sequoyah (SQN) and Watts Bar (WBN) Nuclear Plants. Evaluations performed for SQN (EQC Package SQNEQ-CABL-009) documented that the test was successful in demonstrating the acceptability of cables from the two Anaconda contracts for use inside containment at SQN.

The WBN Environmental Qualification Project (WBN-EQP) has been organized to address qualification and documentation for all 10 CFR 50.49 equipment and cable at WBN, and WBN-EQP expects the establishment of full qualification of the cable from contracts 85112 and 85861 for use inside WBN's containment due to the similarity of the environmental parameters of SQN and WBN. Also, as part of the WBN-EQP program, development of an installed Class 1E cable listing and a specific environmental qualification evaluation for each cable type and contract (including the cable from the contracts identified by NCR 6302) will be performed, and all the cable from these two Anaconda contracts not having proper qualification for its installed application will be removed and replaced with qualified cables.

TVA is still evaluating corrective actions required to prevent a recurrence of this problem. These actions will be described in our next report to be provided to NRC on or about May 16, 1986.