TENNESSEE VALLEY AUTHORITY

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Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 1217
230 Peachtree Street, NW.
Atlanta, Georgia 30303

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Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - FAULTY CABLE TRAY SUPPORT INSTALLATION - NCR CAQR E-5

The subject deficiency was initially reported to NRC-OIE Inspector Bruce Cochran on March 16, 1978. Enclosed is our first interim report. The final report will be submitted by July 7, 1978.

Very truly yours,

J. E. Gilleland
Assistant Manager of Power

Enclosure
cc: Dr. Ernst Volgenau, Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE

Watts Bar Nuclear Plant Units 1 and 2
Faulty Cable Tray Support Installation - NCR CAQR E-5

First Interim Report

Description of Deficiency

This deficiency was discovered when an electrician at the plant site reported to his supervisor the improper installation of the cable tray supports in one area of the plant. An as yet undetermined number of surface plates and bolts that are used to attach the surface plates to concrete by means of self-drilling expansion anchors have been damaged due to improper alignment during installation.

The cause of this deficiency was that the bolts that hold the surface plates to the self drilling expansion anchors were, in some cases, not properly aligned with the holes in the surface plates. As a result, the installers improperly used force (a hammer) to align the expansion anchor bolts to the holes in the surface plates.

The extent of this deficiency is still being investigated. It is known that improper installation procedures for cable tray supports were used on El.737 of the Auxiliary Building. If other areas of improper installation of cable tray supports are discovered during the investigation, they will be covered in our final report on this deficiency.

Safety Implications

If this deficiency had remained uncorrected, a seismic event at some time during the life of the plant might have caused failure (collapse) of the cable trays attached to the concrete walls using the deficient cable tray support installation methods. Failure of the cable trays in question could possibly result in loss of control of some safety-related equipment due to failure of control cables in the affected cable trays. Loss of control of some safety-related equipment could have an effect on the safe operation of the plant.

Corrective Action

Following identification of this deficiency, installation of cable tray supports using surface plates bolted to expansion anchors in concrete was suspended. Craft personnel were then classroom instructed in proper installation procedures before cable tray support installation was permitted to be resumed.

All cable tray support installations using surface plates that are bolted to expansion anchors in concrete on El.737 of the Auxiliary Building have been examined. As a result of this inspection, 24 surface plates and several bolts have been replaced. Other areas of the plant where this method of cable tray support installation is used are to be examined in the near future. Procedures are being developed at the present time for this investigation.

In order to prevent a recurrence of this type of deficiency, TVA personnel at the plant site are preparing a revision to a site electrical quality control procedure (WBNP-QCP-3.4) to require the presence of an inspector when the support plates are fitted up to the concrete expansion anchors. Other procedural changes are being investigated.