



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

March 18, 2013

10 CFR 50.49

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2
NRC Docket No. 50-391

Subject: Request for Additional Information Regarding Final Safety Analysis Report Amendment Related Section 3.11 - Revised Response (TAC No. ME2731)

Reference: TVA letter to NRC dated August 3, 2011, "Watts Bar Nuclear Plant, Unit 2 - Request for Additional Information Regarding Final Safety Analysis Report Amendment Related Section 3.11- Revised Response (TAC No. ME2731)" [ML12167A221]

In late January 2013, NRC made an informal verbal request for information to facilitate the final review of Final Safety Analysis Report (FSAR) Section 3.11 on Equipment Qualification (EQ). The request covered two issues. The first related to 16 Category II cables discussed in the referenced letter. The second request was for TVA to identify whether Teflon has been used in primary containment electrical penetration assemblies. This letter provides the requested information.

During verification and validation of Unit 2 EQ cables, it was determined that procurement and installation dates of some Unit 2 EQ cables did not meet the cutoff dates for procurement (May 23, 1980, as specified in IE Bulletin 79-01B, Supplement 2) and installation (February 22, 1983, as specified in Regulatory Guide 1.89, Revision 1). One population of such cables was discussed in the referenced letter, and the acceptance for their use was documented in Supplemental Safety Evaluation Report (SSER) 22.

The following table provides the procurement information on the remaining population of Category II cables that have been qualified on the same basis as was described in SSER 22. There are less than 40 cables in this group. This group includes the cables

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discussed in the referenced letter and cables from two additional contracts. The additional contracts were identified during a recent review of EQ cable contracts. The table shown below updates the information that was provided in the referenced letter. The change to the number of Category II cables and contracts involved was verbally discussed with the NRC.

<u>Contract</u>	<u>Manufacturer</u>
71C070005476202	Triangle-Pwc-Inc.
77K0500822401	American Insulated Wire Corp
79K0500824597	American Insulated Wire Corp
79K0500824965	American Insulated Wire Corp
80K0700826542	Rockbestos Company

These were new cables installed in the plant for the first time in Unit 2. Material purchased under these contracts has been determined to meet the qualification criteria of NUREG-0588 Category II using the guidelines established in IEEE 323-1971.

Material was purchased under Contracts 71C070005476202, 79K0500824597, 79K0500824965, 79K0500824965, and 80K0700826542 prior to May 23, 1980, and was on hand as part of TVA stock before February 22, 1983. Some of this material was installed in Unit 2 between 1980 and 1983 and some was installed in the 1983 to 1985 timeframe. Material from each of these contracts was also installed at other TVA facilities prior to the February 22, 1983, date and is in full compliance with the qualification criteria of NUREG 0588 Category II as documented in site EQ Binders. Unit 2 material from these contracts is considered equally qualified as those at other TVA facilities.

NRC addressed the equipment qualification of electrical penetration assemblies in SSER 22 with an open item for the NRC staff to confirm that the assemblies were installed in accordance with the EQ tested configuration and that the feedthrough modules were manufactured by the same company as the tested modules consistent with the information in the EQ test report. NRC's review of the penetration assemblies was documented in Inspection Report 2011-607, and the open item was closed. In response to the verbal NRC request, TVA confirmed the WBN Unit 2 containment electrical penetrations have been qualified to an integrated dose of at least 1.2 E8 rad gamma as well as the other normal and accident containment environmental conditions. Inner and outer containment seal integrity is maintained as established by the qualification testing. The primary containment electrical penetrations for WBN Unit 2 use a polysolamide sealing material and Kapton cable insulation. The Kapton insulation is a thin tape that is amber in color. The insulated conductor has a minimum of two half-lapped layers of Kapton with a layer of Teflon FEP (Fluorinated Ethylene Propylene) that serves as an adhesive between the layers of Kapton. This is the qualified configuration. TVA has confirmed that the feedthrough modules do not contain extruded Teflon cable insulation or Teflon seals. In 1985, Conax identified that a limited number of their penetration designs did use extruded Teflon cable insulation and/or Teflon as the seal material. Conax made the requisite 10 CFR Part 21 Reports at that time. The Part 21 Report listed the nuclear units that installed extruded Teflon cable insulation or Teflon seal penetration designs. WBN was not one of the plants identified as affected by Conax. The Part 21 Report also stated that the penetration design with Kapton insulation such as that used at WBN Unit 2 was fully qualified.

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There are no new regulatory commitments contained in this letter. If you have any questions, please contact Gordon Arent at (423) 365-2004.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 18th day of March, 2013.

Respectfully,



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