

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

July 10, 1981

SQRD-50-328/81-43

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303



Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 - FOXBORO MCA TRANSMITTERS -
SQRD-50-328/81-43 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector P. Taylor on June 12, 1981 in accordance with 10 CFR 50.55(e) as NCR SQN EEB 8112. Enclosed is our first interim report. We expect to submit our next report by August 25, 1981. We consider 10 CFR 21 applicable to this deficiency.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNIT 2
FOXBORO MCA TRANSMITTERS
SQRD-50-328/81-43
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

A letter from the Foxboro Company dated March 12, 1981 indicated that some Foxboro transmitters might have deficient components in the amplifier of the transmitter. The transmitters which might be affected are models E-11 and E-13 with suffix codes /MCA, /MCA/RRW, or /MCA/RR and a 10 to 50 mA output.

The first issue involves the possible use of incorrect insulating sleeving on transistor and zener diode lead wires in the amplifier. Radiation resistant sleeving consisting of a silicone coated glass fiber braid has been substituted by a teflon sleeving in some transmitters. Tests have shown that teflon will become brittle and deteriorate with a substantial integrated radiation dose. Foxboro testing has demonstrated that the teflon sleeving used in these devices will withstand an integrated dose of 10 megarads with no noticeable deterioration. Tests of 200 megarads produce the brittle conditions which can result in the teflon flaking from the wires.

The second issue involves the use of a specific vendor's capacitor, which is not hermetically sealed (although claimed to be so). As a result, the capacitor electrolyte can leak under adverse conditions, specifically heat and time. This phenomenon was observed in recent tests of transmitters using these capacitors. The capacitor in question is manufactured by Cornell-Duelbilier and can be specifically identified by a type number in the form TX-65-XXXX as well as a monogram in a box followed by a date code, e.g., CDE 0874. It is assigned Foxboro part No. N0141MF.

The two deficiencies described above may have been caused by Foxboro's failure to inspect or specify these components of the transmitter, and they represent a potential breakdown in the vendor's QA program.

An identical NCR is being handled for Watts Bar Nuclear Plant under report WBRD-50-390/81-54, WBRD-50-391/81-52 (NCR WBN EEB 8109).

Interim Progress

TVA is inspecting all Foxboro model E-11 and E-13 type MCA transmitters which are used in safety systems. Sleeving inspected thus far has been of the correct type. Any amplifier boards which are found to contain the deficient capacitors will be replaced at Sequoyah.