TENNESSEE VALLEY AUTHORITY
KNOXVILLE, TENNESSEE 37902
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JUL 14 1988

WBRD-50-390/86-43

10 CFR 50.55(e)

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

Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority)

Docket Nos. 50-390
50-391

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - CRAZING OF CONAX ELECTRICAL PENETRATION SEALANT - WBRD-50-390/86-43 - SUPPLEMENTAL FINAL REPORT

The subject deficiency was initially reported to NRC Region II Inspector Bob Carroll on April 2, 1986, in accordance with 10 CFR 50.55(e) as Nonconforming Condition Report (NCR) W-356-P. Our interim and final reports were submitted on April 28 and August 20, 1986. Enclosed is our supplemental final report which is being provided as committed in our response to violation 87-13-01.

If there are any questions, please telephone G. R. Ashley at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley, Director
Nuclear Licensing and
Regulatory Affairs

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

JUL 14 1988

cc (Enclosure):

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ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1
CRAZING OF CONAX ELECTRICAL PENETRATION SEALANT
NCR W-356-P
WBRD-50-390/86-43
10 CFR 50.55(e)

SUPPLEMENTAL FINAL REPORT

Description of Deficiency

During cleaning operations being performed by TVA personnel on Conax electrical penetrations at WBN, damage to the sealant material on the ends of penetration feedthroughs was identified. This damage consists of crazing and/or cracking of the sealant from the outside tip inward; however, the depth of the damage cannot be visually determined. An analysis of the cleaning solution being used on the sealant (denatured alcohol) revealed the presence of a small amount of Ketone (a chemical prohibited by Conax from use on the sealants). However, other penetrations not subjected to the cleaning fluid show the same type of damage. Therefore, the cleaning fluid did not contribute to the identified condition.

Safety Implications

The Conax Corporation has informed TVA that the condition identified by this nonconformance report is the result of the mechanical swaging of the stainless steel overtube during the normal manufacturing process.

As stated in a letter from Conax Corporation to TVA dated June 10, 1988, "To evaluate polysulfone sealants containing cracks, voids, nicks, and crazing, Conax incorporated feedthrough modules containing these types sealants into an Electric Conductor Seal Assembly Type Test Design Qualification Report in accordance with the requirements of IEEE Standard 323-1974 and NUREG-0588 with parameter values as noted in Conax Test Plan IPS-1080. Conax Test Report IPS-1079 delineates the results of this type test program and auditably verifies that the test specimens maintained full mechanical sealant integrity before, during and after completion of the test program."

As such, no actions are required concerning the crazed sealants, and TVA has dispositioned Nonconforming Condition Report (NCR) W-356-P to "use-as-is." Accordingly, TVA no longer considers 10 CFR 50.55(e) to be applicable to this item.