

TENNESSEE VALLEY AUTHORITY  
400 Chestnut Street Tower II

January 2, 1981

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 - STRESS CORROSION CRACKING IN TUBING ON THE  
REACTOR COOLANT PUMP OIL COOLERS - NCR SQN WEB 8028 - FIRST INTERIM  
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
R. W. Wright on December 2, 1980, in accordance with 10 CFR  
50.55(e). Enclosed is our first interim report. We expect to  
submit our next report by February 3, 1981. We consider 10 CFR 21  
applicable to this deficiency.

If you have any questions concerning this matter, 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, Jr., Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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ENCLOSURE  
SEOUOYAH NUCLEAR PLANT UNIT 2  
STRESS CORROSION CRACKING IN TUBING  
ON THE REACTOR COOLANT PUMP OIL COOLERS  
NCR SONNEB8028  
10CFR50.55(e)  
FIRST INTERIM REPORT

Description of Deficiency

Some reactor coolant pump lubricating oil coolers have developed excessive tube leakage due to stress corrosion cracking (SCC) in the tube material. Examination of the tube material removed from one such heat exchanger revealed that the tubes were of admiralty brass rather than the specified 90-10 copper-nickel. Admiralty brass has been found to be susceptible to stress corrosion cracking in this application due to the presence of ammonia, which in conjunction with residual and operating stresses, causes the stress corrosion cracking. The ammonia present is apparently a product of the decomposition of hydrazine from the component cooling system water treatment.

Interim Progress

TVA has requested a quotation from Westinghouse to replace the unit 2 reactor coolant pump lubrication oil cooler tubing with 90-10 copper-nickel.