TENNI SSEE VALLEY AUTHORITY CHAITAN DOGA, TENNESSEE 374-1

400 Chestnut Street Tower II

April 15, 1981



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

U.S. Nuclear Regulatory Commission

Washington, DC 20555

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 - ENVIRONMENTAL QUALIFICATION OF SAFETY-RELATED ELECTRICAL EQUIPMENT - SQRD-50-328/81-04 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on December 8, 1980, in accordance with 10 CFR 50.55(e) as NCR SQN EEB 8044R1. Interim reports were submitted on January 8, February 12, and March 17, 1981. Enclosed is our final report.

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

co: Mr. Victor Stello, Director (Enclosure)) Office of Inspection and Enforcement

### ENCLOSURE

# SEQUOYAH NUCLEAR PLANT UNIT 2 ENVIRONMENTAL QUALIFICATION OF ELECTRICAL EQUIPMENT SQRD 50-328/81-04 10 CFR 50.55(e) FINAL REPORT

## Description of Deficiency

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Automatic Switch Company (ASCO) solenoid valves (models HB8300C58RU, HB8262C22, HTX8320A22V, and HC8316C15) are used to control various containment isolation valves in the plant control air, radiation - menitoring, and ventilation systems. The subject valves are located in the annulus region. Information obtained from ASCO indicated that the solenoids in question were not qualified for the following post accident environment in the annulus:

Temperature:	150° F
Pressure:	Atmospheric
Relative Humidity:	100 percent
Radiation:	7 X 10' rads

## Safety Implications

Post accident operability of these values is required for a period of one year. The solenoids are normally energized, thereby allowing air pressure to open the isolation value. Upon loss of electrical signal, the solenoid deenergizes and allows the isolation value to close. Failure of the solenoid values as a result of the post accident environment would result in loss of function of the associated containment isolation values.

#### Corrective Action

The solenoids in the control air and ventilation system (ASCO models HB8300C58RU, HB8262C22, and HT8316C15) will be replaced with qualified valves. A TVA engineering change notice has been written which requires the replacement of these valves before unit 2 fuel loading. This work will be accomplished within the specified implementation schedule. As for the solenoids in the radiation monitoring system (ASCO model HTX8320A22V), TVA has reviewed the solenoid valve design against the calculated accident environment and has concluded that the present valves are acceptable for service on an interim basis. However, in accordance with the guidelines in NUREG-0588, these valves will be either type-tested to verify full qualification or replaced before June 30, 1982.