Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379-2000

September 14, 1995

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

Gentlemen:

In the Matter of) Docket No. 50-327
Tennessee Valley Authority)

SEQUOYAH NUCLEAR PLANT (SQN) - UNIT 1 - FACILITY OPERATING LICENSE DPR-77 - 10 CFR 50, APPENDIX R - SPECIAL REPORT 95-04, REVISION 1

The enclosed special report revision provides information concerning an additional noncompliance with the requirements of 10 CFR 50, Appendix R. This report was originally submitted on July 26, 1995.

If you have any questions concerning this submittal, please telephone J. W. Proffitt at (615) 843-6651.

Sincerely,

R. H. Shell

R. H. Shell
SQN Site Licensing Manager

Enclosure
cc: See page 2

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ENCLOSURE

SEQUOYAH NUCLEAR PLANT (SQN)
SPECIAL REPORT 95-04, REVISION 1
14-DAY FOLLOW-UP REPORT

Description of Condition

A noncompliance with 10 CFR 50, Appendix R, Section II.G.2 requirements, was documented on Problem Evaluation Report (PER) SQ950685PER on July 7, 1995. The PER was revised on September 6, 1995, to document the identification of an additional noncompliance.

Section II.G.2 requires redundant safe shutdown components to be separated from each other by one of the following methods:

1. Separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating.

2. Separation of cables and equipment and associated nonsafety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area.

3. Enclosure of cables and equipment and associated nonsafety circuits of one redundant train in a fire barrier having a 1-hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area.

Condition 1

During the performance of an enhancement to the Appendix R program, a concern was identified involving the following Unit 1 cables that are not separated as described above.

Cable No.	Cable Used For
1V5598B	Control for 1-PCV-68-334 reactor coolant system (RCS) pressurizer power-operated relief valve (PORV)
1PL4975A	Power supply for Emergency Diesel Generator (D/G) Aux Board 1A1-A
1PL4978A	Power supply for Emergency D/G Aux Board 1A2-A

The interaction area is in 480-volt Shutdown Transformer Room 1A on Elevation 749 of the auxiliary building.

Condition 2

During the continued performance of the Appendix R program review, the following condition was identified. The interaction is located in 125-volt Vital Battery Board Room II.

Cable No.	Cable Used For
1V5607A	Normal control power supply for RCS PORV 1-PCV-68-340A
1V5608A	Auxiliary control power supply for RCS PORV 1-PCV-68-340A
B76	Control power supply for the emergency D/G 1B-B control circuit

Cause of Condition 1

Cable 1V5598B is routed in cable trays in 480-volt Shutdown Board Transformer Room 1A on Elevation 749 in the auxiliary building. Cables 1PL4975A and 1PL4978A are routed in conduit in the same room with less than 20 feet of separation from Cable 1V5598B with no installed 1-hour rated fire barriers. A single fire in the area could cause spurious opening of the solenoid-operated 1-PCV-68-334 valve and inoperability of D/G 1A-A. For spurious opening of 1-PCV-68-334, RCS pressure control is maintained by closing motor-operated PORV Block Valve 1-FCV-68-333. During a loss of offsite power, the block valve is powered from D/G 1A-A. Therefore, a loss of offsite power coincident with a fire in this area could result in the loss of RCS pressure control.

Cable 1V5598B does not contain wire combinations that could cause spurious operation. However, for high/low pressure devices, spurious operation from hot shorts with other cables in the cable tray must be considered.

This issue was identified as a result of an enhancement to the Appendix R program. Specifically, this upgrade will establish a database that relates fire zones to the Appendix R cables in those fire zones. The problem was identified while data was being collected for this database.

Cause of Condition 2

It was recognized in March 1985 that the power cables for 1-PCV-68-334 were routed through 125-volt Vital Battery Board Room II. It was incorrectly determined that an interaction did not exist in this room since 1-FCV-68-322 (block valve for 1-PCV-68-334) would be available. Cables for Block Valve 1-PCV-68-332 are not in the area but are powered from train B which is not available because of the possible loss of the train B D/G (due to cable B76 being in the same area). Control Cable B76 is routed from 125-volt Vital Battery Board II, Panel 4, to the Shutdown Board 1B-B relay logic panel and provides control power for the D/G 1B-B remote control circuit. To ensure compliance with 10 CFR 50, Appendix R, power from D/G 1B-B is required for the closure of the block valve should the same postulated fire cause the spurious opening of Valve 1-PCV-68-340A.

Corrective Actions

The affected rooms are being covered by an hourly, roving fire watch patrol. In addition, the involved room is protected by fire detectors and an automatic fire suppression system.

These cable interactions will be resolved as a part of the ongoing Thermolag issue resolution.

A review of the Unit 2 equivalent cables was performed, and it was determined that this condition does not exist on Unit 2.