



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

JUN 26 1991

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2 - FACILITY OPERATING LICENSES  
DPR-77 AND DPR-79 - SPECIAL REPORT 91-09 - FIRE PROTECTION PLAN

The enclosed special report provides details concerning a noncompliance with the requirements of Unit 2 License Condition 2.C.13.a. This issue was initially reported by telephone notification at 1138 Eastern daylight time on June 13, 1991, and by facsimile dated June 13, 1991. Details of the noncompliance are provided in the enclosure. The noncompliance condition is applicable to Units 1 and 2. This report is being made in accordance with Unit 2 License Condition 2.H.

If you have any questions concerning this submittal, please telephone Russell R. Thompson at (615) 843-7470.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

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Enclosure  
cc: See page 2

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U.S. Nuclear Regulatory Commission

**JUN 26 1991**

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ENCLOSURE  
14 Day Follow-Up Report  
Special Report 91-09

Description of Condition

This special report addresses the requirements of Unit 2 License Condition 2.C.13.a requiring TVA to maintain and implement all provisions of the approved fire protection plan, which, in part, commits to barriers of specified fire-rated durations in certain plant locations. A noncompliance with the above-cited license condition was identified during the periodic performance of surveillance O-SI-MIN-302-001.0, "Visual Inspection of Electrical Penetration Fire Barriers - System 302," on June 12, 1991, at approximately 1250 Eastern daylight time (EDT).

Two Modifications insulators performing the survey discovered a breach from the main control room (MCR) to the cable tunnel below in the bottom of MCR panel 2-M-13, Cabinet III. The air foreman and he immediately contacted Fire Operations and requested a breaching permit. Fire Operations determined the breach had to be evaluated under O-TI-SXX-000-016.0, "Breach of Emergency Control Room Pressurization Boundary (ECRPB)." At this time, Fire Operations notified the shift operations supervisor (SOS) of the breach. At 1331 EDT on June 12, 1991, both units entered Limiting Condition for Operation (LCO) 3.7.12. Systems Engineering was contacted by the SOS to assist in calculating the size of the breach.

A work request was initiated to correct the problem and at approximately 1600 EDT on June 12, 1991, steps were taken to seal the breach. On June 13, 1991, at approximately 1327 EDT, documentation confirming that the breach had been sealed properly was reviewed by the SOS, and LCO 3.7.12 was exited.

Subsequent investigation determined that the breach occurred on September 8, 1990, during the implementation of a work plan installing the Unit 2 Cycle 4 (U2C4) nuclear instrumentation Gamma Metrics modification. Modifications' craftsmen were instructed to install a new 1-1/2 inch conduit in the bottom of Panel 2-M-13 Cabinet II. This installation required the fire barrier foam in the bottom of the panel to be breached and a hole cut in a steel plate for the installation of the conduit. The proper permits were obtained, including a Physical Security Instruction (PHYSI) 13, "Breaching Permit Fire Barrier Breach," breach permit, and an ECRPB breach permit.

The craftsmen inadvertently proceeded to breach the foam insulation in the bottom of Cabinet III to support the conduit installation. While removing the foam insulation, the subject breach (hole in foam insulation to spreading room) was made. A simplified sketch of the breach is attached. It appears that the craftsmen were not aware that they had inadvertently breached the ECRPB through the foam insulation. The craftsmen proceeded to install the conduit in the bottom of Cabinet III through the steel plate and prepared to install the cable.

On September 9, 1990, the cable installation was started. The cable was pulled from the other termination point to the conduit just below Panel 2-M-13, Cabinet III in the spreading room. At this time, it was discovered that the conduit had been installed in the wrong cabinet. Craft and engineering supervisor were notified of the incorrect installation, but

were unaware of the inadvertant ECRPB breach. The original PHYSI-13 permit was still open for the conduit installation, and was considered still applicable for the breach in Cabinet II (instead of obtaining a second breach permit). The craft removed the conduit from the bottom of 2-M-13 Cabinet III, plugged the conduit in Cabinet III, and rerouted the conduit to Cabinet II. The cable installation was then completed.

Paper work for resealing Cabinet II was given to the oncoming shift. Cabinet II was resealed and the PHYSI-13 permit was closed as part of the work plan. The conduit in Cabinet III was plugged; however, no actions were initiated to reinsulate the bottom of Cabinet III until it was discovered on June 12, 1991, during the performance of the scheduled surveillance.

#### Cause of the Condition

The breach discovered from the MCR to the cable spreading room resulted from inadvertent installation of a conduit in panel 2-M-13, Cabinet III instead of Cabinet II. A failure to initiate appropriate documentation and tracking paper for the inadvertent Cabinet III breach also appears to have contributed to failure to correct this condition. Investigation into the cause of the condition is ongoing. The results will be provided in Licensee Event Report (LER) 50-327/91012.

#### Analysis of Condition

The breach penetrated the fire barrier between the MCR and the cable spreading room. The continuous presence of personnel in the MCR in conjunction with existing fire detection and suppression systems in both the MCR and cable spreading room, provide assurance that a fire in these areas would be identified in order to initiate appropriate response actions.

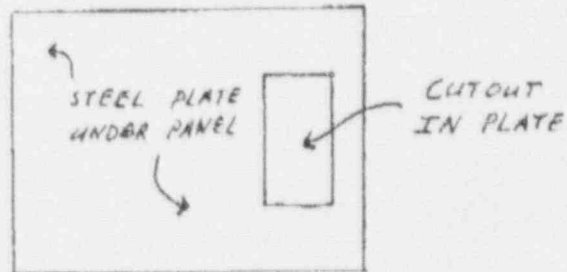
Because the breach also penetrated the ECRPB, the operability of the control room emergency ventilation system (CREVS) was evaluated. At the time of discovery, no other breaches were open in the pressurization boundary. The size of the discovered breach was calculated to be within limits such that operability of CREVS was not impacted. An evaluation of potential CREVS operability impacts since the breach was initially opened is ongoing. The results will be included in LER 50-327/91012.

#### Corrective Action

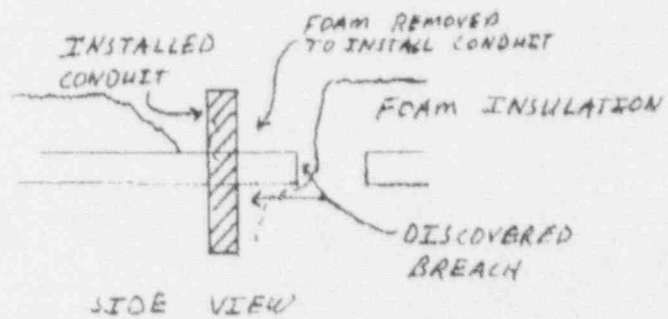
Upon discovery of the breach, the operability of fire detection systems in the affected areas was verified, and the breach included in fire watch patrols, in accordance with LCO 3.7.12. A work request was initiated to repair the breach. At approximately 1600 EDT on June 12, 1991, the breach was sealed. Documentation for sealing the breach was completed, and LCO 3.7.12 exited at 1327 EDT on June 13, 1991.

Corrective actions to prevent recurrence are being developed, and will be included in LER 50-327/91012.

14 Day Follow-Up Report  
Special Report 91-09



TOP VIEW OF PANEL  
FLOOR



SIDE VIEW