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Vice President, Regulatory Services PDR's

August 5, 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

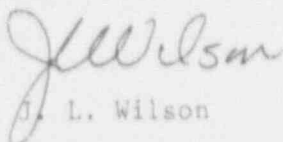
SEQUOYAH NUCLEAR PLANT (SQN) - TECHNICAL SPECIFICATION 3.7.11.1 - SPECIAL  
REPORT 91-12

The enclosed special report provides details concerning the inoperability of the backup fire suppression water system. The event was initially reported by telephone notification at 1533 Eastern daylight time on July 23, 1991, and by facsimile dated July 23, 1991. Because the event involves the fire suppression water system, it is applicable to Units 1 and 2. This report is being made in accordance with Action b.2.c of Technical Specification 3.7.11.1.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
J. L. Wilson

Enclosure  
cc: See page 2

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U.S. Nuclear Regulatory Commission  
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ENCLOSURE  
14-DAY FOLLOW-UP REPORT  
SEQUOYAH NUCLEAR PLANT  
SPECIAL REPORT 91-12

Description of Condition

Technical Specification 3.7.11.1 requires the fire suppression water system to be operable at all times. With the system inoperable, a backup system must be established within 24 hours. Prior to this event, the SQN fire suppression water system had been declared inoperable, and a backup system utilizing the existing system components had been established on May 6, 1991. Details were provided in Special Report 91-04 dated May 20, 1991, and Licensee Event Report (LER) 50-327/91009 dated June 5, 1991.

During the performance of Surveillance Instruction (SI) 73.2, "Fire Pump 1B-B Performance Test," and SI-73.4, "Fire Pump 2B-B Performance Test," on July 22, 1991, an incorrect valve alignment created an open flow path from the fire suppression water system headers to a test drain, which discharges into the intake forebay. Consequently, header pressure for the backup fire suppression water system was lost, and the backup system was declared inoperable at 2115 Eastern daylight time (EDT) on July 22, 1991. Because of the lack of system pressure, the spray and sprinkler systems required by Limiting Condition for Operation (LCO) 3.7.11.2, and the fire hose stations required by LCO 3.7.11.4 were also declared inoperable at 2115 EDT on July 22.

The gradual loss of system pressure was first noted at approximately 1800 EDT on July 22. Efforts were initiated to locate and isolate the cause of the depressurization. The shift operations supervisor (SOS) contacted the Fire Operations unit and the fire protection system engineer to evaluate compensatory measures and to develop a recovery plan. The status of the fire pump test loop isolation valve was checked. The valve was found to be in the open position at 2140 EDT, and was subsequently closed as part of the recovery plan.

Isolation of the turbine building and transformer yard open head sprinkler systems was completed at 2225 EDT to prevent the inadvertent spraying down of plant equipment as the system was being returned to normal. At 2302 EDT a pumper fire truck was used to begin system repressurization. At 0129 EDT on July 23, system pressure had been returned to normal, and the fire suppression water system was aligned for normal service. LCOs 3.7.11.2 and 3.7.11.4 were exited at this time.

Cause of the Condition

The flow path from the fire suppression water system to the intake forebay was the result of Valves 2-26-575 and 0-26-859 (refer to Updated Final Safety Analysis Report, Figure 9.5.1-12) being incorrectly aligned in the open position at the same time. The cause of the incorrect valve alignment is attributed to inappropriate personnel actions.

Investigation into the root cause of the event is ongoing and will be reported in LER 50-327/91020.

#### Analysis of Condition

The evaluation of this condition is ongoing and will be reported in LER 50-327/91020.

#### Corrective Action

Upon discovery of the condition, actions were taken to locate and isolate the problem. When it was determined that system pressure was not available, LCOs 3.7.11.2 and 3.7.11.4 were entered. Actions began to isolate the turbine building and transformer yard open head sprinkler systems to prevent inadvertent spray down of plant equipment upon the system being returned to service. A review of compensatory actions indicated that the available established fire watches, in conjunction with detection and compartmentalization, were appropriate during system return to service. The incorrect valve alignment was corrected, and a pumper was utilized to begin system repressurization following isolation of the turbine building and transformer yard sprinkler systems. The system was returned to normal at 0129 EDT on July 23, 1991.

Corrective actions to prevent recurrence are being developed and will be described in LER 50-327/91020.