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10 CFR 50.54(f)

U. S. Nuclear Regulatory Commission
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Sequoyah Nuclear Plant (SQN)
Facility Operating Licensee No. DPR-77
NRC Docket No. 50-327

90 DAY FOLLOW-UP RESPONSE TO NRC GENERIC LETTER (GL) 2008-01: MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS

Reference: TVA's letter to NRC dated October 11, 2008, 9 Month Response to NRC Generic Letter (GL) 2008-01: Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems, Dated January 11, 2008

The purpose of this letter is to provide the results of the Unit 1 walkdowns performed in the Unit 1 Cycle 16 refueling outage as committed in the reference letter. TVA has completed the evaluations in accordance with the GL for SQN Unit 1. The enclosure contains the evaluation results. The evaluations determined that the primary systems addressed in the GL are in compliance with the technical specification and are capable of performing their intended safety function. In addition, SQN Unit 1 is in compliance with 10 CFR 50, Appendix B, Criterion III, V, XI, XVI and XVII, with respect to the concerns outlined in the GL.

There are no regulatory commitments associated with this submittal. If you have any questions about this change, please contact Beth A. Wetzel at (423) 843-7170.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 24th day of July, 2009.

Sincerely,

Timothy P. Cleary

Enclosure
cc: See page 3

BAW:JWP:SKD
Enclosure
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ENCLOSURE

SEQUOYAH NUCLEAR PLANT (SQN) UNIT 1
90 DAY FOLLOW-UP RESPONSE TO NRC GENERIC LETTER (GL) 2008-01: MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS

In accordance with the requirements of NRC GL2008-01, measurements have been performed of the nominally horizontal piping in the emergency core cooling systems for the piping inside Unit 1 containment. The measurements determined the slope of the installed piping. The survey team ensured that the general piping configuration agreed with the design drawings. No discrepancies in piping configuration were identified.

The surveys were performed by TVA engineering personnel. The walkdown data was evaluated for the purpose of determining the volume of potential gas voids that might exist because of slope or bow in the piping. Piping features such as elbows, tees, reducers, orifice plates, flow restrictors, valves, etc., were included in the evaluation. The safety injection and residual heat removal (RHR) cold leg injection piping inside containment were surveyed up to the secondary reactor coolant system (RCS) check valves.

The survey results are summarized as follows:

Unit 1 A RHR Pump Cold Leg Injection

A total potential void volume of 0.70 cubic feet exists. Most of this volume, 0.58 cubic feet, is in a high spot in the No. 4 accumulator room.

Unit 1 B RHR Pump Cold Leg Injection

A total potential void volume of 0.48 cubic feet exists. A potential void of 0.43 cubic feet is located in the No. 4 accumulator room. This potential void was identified during drawing review for the 9 month response to GL 08-01.

Unit 1 Safety Injection System

A total potential void volume of 1.91 cubic feet exists in the safety injection discharge piping inside containment. A potential void of 1.6 cubic feet was identified in the portion of the piping located in the Raceway. This condition was documented in the Corrective Action Program. Problem evaluation report (PER) 138112 was initiated to address the identified condition. The total potential void volume will not exceed the acceptance criteria of 16 cubic feet for the discharge piping of the safety injection pumps.

Unit 1 Safety Injection System - Cold Leg Accumulator Tanks To RCS Loops

Walkdowns of the cold leg accumulator tanks to reactor coolant loops piping was not performed. The associated piping only contains check valves and there are no pumps required for operation. The cold leg accumulators consist of tanks filled with borated water with a cover gas pressure of a nominal 600 pounds per square inch gauge (psig). The gas pressure is such that should a loss of coolant accident occur and the RCS pressure is reduced to below 600 psig the check valves in the line would open and allow flow into the RCS. A water hammer is not

credible since the pressure on both sides of the check valve would be essentially equal just prior to the cold leg accumulator injection.

Conclusion

The evaluations determined that emergency core cooling systems for Unit 1 addressed in the GL are in compliance with the Technical Specification and are capable of performing their intended safety function.