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July 15, 2010

10 CFR 50.4
10 CFR 50.54(f)

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Sequoyah Nuclear Plant, Units 1 and 2
Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: **Response to Request for Additional Information Regarding Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"**

Reference: Letter from NRC to TVA, "Sequoyah Nuclear Plant, Units 1 and 2 - Request for Additional Information Regarding Generic Letter 2008-01, 'Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems,' (TAC Nos. MD7879 and MD7880)," dated June 9, 2010

By letters dated October 11, 2008, July 24, 2009, and February 19, 2010, Tennessee Valley Authority (TVA) provided responses to Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," for Sequoyah Nuclear Plant (SQN), Units 1 and 2. On June 9, 2010 (Reference), the NRC requested additional information regarding GL 2008-01 be provided by July 16, 2010

The enclosure to this letter provides the TVA response for SQN, Units 1 and 2 to NRC's request for additional information as contained in the referenced letter.

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NRR

There are no new regulatory commitments contained in this letter. If you have any questions concerning this issue, 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 15th day of July, 2010.

Respectfully,

R. M. Krich

Enclosure:
Response to Request for Additional Information Regarding NRC Generic Letter 2008-01

cc (Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Sequoyah Nuclear Plant

ENCLOSURE

Tennessee Valley Authority
Sequoyah Nuclear Plant, Units 1 and 2

Response to Request for Additional Information Regarding NRC Generic Letter 2008-01

NRC Question 1

Discuss the surveillance criteria, surveillance methods, and surveillance locations for emergency core cooling, decay heat removal, and containment spray systems.

TVA Response

The plant Technical Specification (TS) Surveillance Requirement 4.5.2.b.1 for emergency core cooling (ECCS) and residual heat removal (RHR) requires verification that ECCS piping is full of water by venting the ECCS pump casings and accessible piping high points at least once every 31 days. The venting applies to the suction and discharge piping. There are no required surveillances for venting of the containment spray piping, as discussed in Response 2.

The following procedures fulfill this requirement by venting in the listed locations monthly:

Procedure	Piping Segments Vented
1,2-SI-OPS-063-129.A	A Train Safety Injection Pump (SIP) Casing, A Train SIP Hot Leg Injection, Common Cold Leg Injection
1,2-SI-OPS-063-129.B	B Train SIP Casing, B Train SIP Hot Leg Injection
1,2-SI-OPS-062-040.A	A Train Centrifugal Charging Pump (CCP) Casing, CCP Injection Tank Piping, Emergency Boration Piping
1,2-SI-OPS-062-040.B	B Train CCP Casing
0-SI-OPS-074-128.A	A Train RHR Pump Casing
0-SI-OPS-074-128.B	B Train RHR Pump Casing
1,2-SI-OPS-074-128.0	Hot Leg and Cold Leg Injection Piping

The monitoring process for these procedures requires operations to observe the vent discharge through a clear section of hose. The acceptance criterion for these surveillances is to verify that a steady stream of water is obtained from each vent location. Any interruption in flow, which would indicate an accumulation of gas in the vent piping, is timed and recorded in the procedure. There is a procedural requirement to initiate a Corrective Action Program Problem Evaluation Report (PER) when any release of gas is recorded. These venting performances are also trended by the ECCS System Engineer.

In addition to the TS required surveillances, current procedures require ultrasonic level measurement at specific locations on a monthly (i.e., 31 day) basis. This measurement is taken on the safety injection and charging pump minimum flow piping, RHR discharge piping to the safety injection pumps and charging pumps, RHR spray piping, and emergency boration suction to the charging pumps. Any void identified in the piping is vented by the appropriate plant procedures. A PER is written for any identified void, and results are trended by the ECCS System Engineer.

NRC Question 2

Discuss the surveillance intervals for the monitored locations, including justification for surveillance intervals greater than 31 days for emergency core cooling, decay heat removal, and containment spray systems.

TVA Response

As stated above, the surveillance interval for venting of the emergency core cooling and decay heat removal systems is at least once every 31 days. There is no required surveillance interval for the containment spray system. The containment spray system has no credible potential gas intrusion mechanism, other than inadvertent draining resulting from incorrect maintenance or testing procedures, or inadequate post maintenance fill and vent activities. The containment spray system is not connected to a high pressure system or a gas system. Both inadvertent draining and inadequate post maintenance fill and vent activities are adequately addressed by current operating procedures for the containment spray system. Note that performance of the quarterly American Society of Mechanical Engineers (ASME) Operations and Maintenance (OM) Code pump test on the containment spray pumps performs a dynamic vent on all of the containment spray system piping from the Refueling Water Storage Tank (RWST) through the containment spray heat exchangers. Performance of the ASME required quarterly valve strokes on the containment spray isolation valves ensures that the remainder of the containment spray system is full up to the water level in the RWST.

NRC Question 3

Training was not identified in the Generic Letter (GL) 2008-01 but is considered to be a necessary part of applying procedures and other activities when addressing the issues identified in the GL 2008-01. Briefly discuss the training involved to ensure the compliance of emergency core cooling, decay heat removal, and containment spray systems with the NRC requirements as addressed in GL 2008-01.

TVA Response

As a result of Significant Operating Experience Report (SOER) 97-01, "Potential Loss of High Pressure Injection and Charging Capability from Gas Intrusion," training on gas intrusion mechanisms and consequences has been incorporated into operations and maintenance training. Re-training on SOER 97-01 is required for licensed operators every three years. This training was last completed during 2010 Training Cycle 1 in January and February of 2010, and was a combined training module with the non-licensed operators. Gas intrusion events are discussed during initial non-licensed operator training and during licensed operator re-qualification on a periodic basis. Mechanical maintenance training incorporates training on gas intrusion mechanisms and consequences into the training modules for valves, pumps and heat exchangers. Re-training on these topics occur approximately every 4 years. Gas intrusion has been a focus of the training since SOER 97-01 was issued. Engineering continuing training conducted during the fourth quarter of 2008 included training on gas intrusion. The engineering training content included discussion of GL 2008-01 requirements to identify and quantify potential gas collection points. This training included a plant specific example of methods employed to control gas accumulation.