June 3, 2008

10 CFR 50.46

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

Gentlemen:

In the Matter of	)	Docket No. 50-328
Tennessee Valley Authority (TVA)	)	

SEQUOYAH NUCLEAR PLANT (SQN) - 10 CFR 50.46 - 30-DAY SPECIAL REPORT OF SIGNIFICANT CHANGES

Reference: TVA letter to NRC dated November 14, 2007, "Sequoyah Nuclear Plant (SQN) - 10 CFR 50.46 Annual Report of Non-Significant Changes"

The purpose of this letter is to provide changes to the calculated peak cladding temperature (PCT) resulting from recent changes to the SQN emergency core cooling system (ECCS) evaluation model. This submittal satisfies the reporting requirements in accordance with 10 CFR 50.46(a)(3)(ii). The enclosure contains a summary of the recent changes to the SQN Unit 2 ECCS evaluation model and the affect of these changes on the calculated PCT. The changes for Unit 2 result in an absolute calculated peak clad temperature change in excess of 50 degrees Fahrenheit from that reported in the last annual report.

TVA submitted a license amendment request (LAR) on July 26, 2007, as supplemented on October 3, 2007, for reanalysis of the large break loss-of-coolant accident to support the spring 2008 Unit 2 refueling outage. The amendment was approved on April 4, 2008.

There are no regulatory commitments in this letter. Please direct questions concerning this issue to me at (423) 843-7170.

Sincerely,

Original signed by:

James D. Smith
Manager, Site Licensing and
Industry Affairs

cc (Enclosure):
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ENCLOSURE

TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNIT 2

10 CFR 50.46 SPECIAL REPORT OF SIGNIFICANT CHANGES

In accordance with the reporting requirements of 10 CFR 50.46 (a)(3)(ii), the following is a summary of the limiting design basis accident (loss-of-coolant accident) analysis results established using the current SQN emergency core cooling system (ECCS) evaluation model.

Large Break Loss-of-Coolant Accident (LB LOCA)

	PCT
Previous Licensing Basis peak cladding temperature (PCT)	2197°F
1. Reanalysis using AREVA realistic analysis methodology	- 195°F
Updated Licensing Basis PCT	2002°F
Net Change	-195°F

The LB LOCA for SQN Unit 2 has been re-analyzed using the realistic large break loss of coolant accident (RLBLOCA) methodology described in Topical Report No. EMF-2103, Revision 00, "Realistic Large Break LOCA Methodology for Pressurized Water Reactors." The realistic analysis methodology replaces the deterministic methodology used in the previous LB LOCA analysis of record (i.e., the methodology described in Topical Report No. BAW-10168P-A, "B&W Loss of Coolant Accident Evaluation Model for Recirculating Steam Generator Plants"). The SQN Unit 2 plant specific analysis is detailed in Topical Report No. ANP-2655(P), Revision 01, "Sequoyah Unit 2 Realistic Large Break Loss-of-Coolant Accident Analysis." This report was submitted to NRC as part of SQN Technical Specification Change TS-07-04. The plant-specific application analysis was found to be acceptable as discussed in the NRC Safety Evaluation Report dated April 04, 2008.

Results

The results of the SQN Unit 2 LB LOCA are summarized in Section 3.5 of Topical Report No. ANP-2655(P), Revision 01. The analysis meets the 10 CFR 50.46 acceptance criteria. The limiting calculated fuel cladding temperature was determined to be 2002 degrees Fahrenheit. This result represents a net reduction in the calculated peak clad temperature from the previous analysis of record of 195 degrees Fahrenheit.