Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

J. L. Wilson
Vice President, Sequoyah Nuclear Plant

March 27, 1992

TVA-SQN-TS-92-01 10 CFR 50.90

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) - REQUEST FOR LICENSE AMENDMENT TO TECHNICAL SPECIFICATIONS (TS) - SPENT-FUEL POOL STORAGE CAPACITY INCREASE

In accordance with 10 CFR 50.90, we are enclosing a requested amendment to licenses DPR-77 and DPR-79 to change the TS of SQN Units 1 and 2. The proposed changes support planned modifications to increase SQN spent-fuel pool storage capacity and would revise the following TS sections:

Surveillance Requirement (SR) 4.9.1.4 - to reference TS 5.6.1.1.d that describes a three region fuel arrangement.

SR 4.9.1.5 - to require chemical analysis of the boron concentration in the cask loading area of the spent-fuel pool to be greater than or equal to 2000 parts per million at least once per 72 hours during fuel movement in that area.

Limiting Condition for Operation for 3.9.7 - to require an impact shield to be placed over the cask loading area (provided fuel is stored there) when utilizing the crane to move loads across the cask loading area. Added Figure 3.9-1, which describes the relationship between load, allowable height, and impact area for objects to be carried over the impact shield.

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SR 4.9.7.1 - to clarify SR for demonstrating crane interlocks and physical stops that prevent crane hook travel over the spent-fuel pool are operable.

SR 4.9.7.2 - to verify administrative requirements concerning the impact shield are met before moving loads in excess of 2100 pounds across the cask pit area.

Bases 3/4.9.7 - to describe the calculated load criteria in relation to the cask loading area impact shield for prevention of penetration in the event of a load drop.

TS 5.6.1.1 (Criticality - Spent Fuel) - to allow a change in the placement of fuel assemblies from a nominal 10.375-inch, center-to-center distance to a nominal 8.972-inch, center-to-center distance between fuel assemblies placed in the proposed new storage racks. This change would also create a three-region storage arrangement in the spent-fuel pool with accompanying definitions and an explanation of where fuel assemblies would be stored according to associated initial fuel enrichment and burnup parameters. Added Figure 5.6-1 to illustrate a typical arrangement of fuel regions, Figure 5.6-2 to illustrate internal module checkerboarding of fresh fuel with empty cells, and Figure 5.6-3 to illustrate graphically the two fuel burnup-enrichment equations.

TS 5.6.3 (Capacity) - to change the current spent-fuel storage capacity from 1386 fuel assemblies to 2091 fuel assemblies and provide an additional storage capacity of no more than 225 fuel assemblies in a proposed fuel rack storage module to be located in the cask loading area of the cask pit, for a total of 2316 fuel assemblies.

The proposed TS changes are provided in Enclosure 1. A report entitled, "Spent-fuel Pool Modification for Increased Storage Capacity," prepared by TVA and its contractor, Holtec International, is provided in Enclosure 2 and supports the above TS changes. A proposed determination of no significant hazards consideration performed pursuant to 10 CFR 50.92 is provided in Enclosure 3. A proposed environmental impact evaluation is provided in Enclosure 4.

TVA does not intend to begin actual installation of the proposed spent-fuel storage racks until January 3, 1994. In order that this work can be properly planned and executed on a prudent schedule, we request your approval of these changes by October 1, 1992; however, the changes proposed in this letter are such that implementation is not possible until the physical reracking occurs. We therefore request that the proposed TS changes become applicable upon initiation of the modifications for reracking of the spent-fuel pool and to be fully implemented upon completion of the rerack modification.

Please direct questions concerning this issue to C. R. Davis at (615) 751-7509.

Sincerely,

J. L. Wilson

Sworn to and subscribed before me
this 27th day of MARCH 1992

Mary Catherine Nunley
Notary Public

My Commission Expires 8-4-92

Enclosures
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