October 2, 1995

Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: REVISION TO THE TECHNICAL SPECIFICATION BASES SEQUOYAH NUCLEAR PLANT UNIT 2

Dear Mr. Kingsley:

By letter dated September 15, 1995, the staff issued a change to Bases page 3/4 7-2 of the Sequoyah Nuclear Plant Unit 2 Technical Specifications. It has subsequently been discovered that this change did not reflect the changes made per Amendment No. 196, dated August 2, 1995. Attached are the corrected technical specification pages B 3/4 7-2 and B 3/4 7-2a. We regret any inconvenience this may have caused.

Sincerely,

Original signed by

David E. LaBarge, Sr. Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: TS Pages B3/4 7-2 and 7-2a

cc w/enclosure: See next page

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Q = Nominal NSSS power rating of the plant (including reactor coolant pump heat), Mwt

K = Conversion factor, 947.82 $\frac{(Btu/sec)}{Mwt}$

w_s = Minimum total steam flow rate capability of the operable MSSVs on any one steam generator at the highest MSSV opening pressure including tolerance and accumulation, as appropriate, in lb/sec. For example, if the maximum number of inoperable MSSVs on any one steam generator is one, then w_s should be a summation of the capacity of the operable MSSVs at the highest operable MSSV operating pressure, excluding the highest capacity MSSV. If the maximum number of inoperable MSSVs per steam generator is three then w_s should be a summation of the capacity of the operable MSSVs at the highest operable MSSV operating pressure, excluding the three highest capacity MSSVs.

h_{fg} = heat of vaporization for steam at the highest MSSV opening pressure including tolerance and accumulation, as appropriate, Btu/lbm

N = Number of loops in plant

The values calculated from this algorithm must then be adjusted lower to account for instrument and channel uncertainties.

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The AFW System is configured into three trains. The AFW System is considered OPERABLE when the components and flow paths required to provide redundant AFW flow to the steam generators are OPERABLE. This requires that the two motor-driven AFW pumps be OPERABLE in two diverse paths, each supplying AFW to separate steam generators. The turbine-driven AFW pump is required to be OPERABLE with redundant steam supplies from each of two main steam lines upstream of the MSIV's, and shall be capable of supplying AFW to any steam generator. The piping, valves, instrumentation, and controls in the required flow paths also are required to be OPERABLE.

The AFW System mitigates the consequences of any event with loss of normal feedwater.

The design basis of the AFW System is to supply water to the steam generator to remove decay heat and other residual heat by delivering at least the minimum required flow rate to the steam generators at a pressure corresponding to 1085 psig. This pressure is in excess of the maximum expected steam generator pressure with the existing safety valve setpoints.

In addition, the AFW System must supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions. Sufficient AFW flow must also be available to account for flow losses such as pump recirculation and line breaks.

The limiting Design Basis Accidents (DBAs) and transients for the AFW System are as follows:

a. Feedwater Line Break (FWLB); and

b. Loss of main feedwater (MFW).

In addition, the minimum available AFW flow and system characteristics are credited for removing decay heat in the analysis of a small break loss of coolant accident (LOCA).

The AFW System design is such that it can perform its function following a FWLB between the MFW isolation valves and containment, combined with a loss of offsite power following turbine trip, and a single active failure of the steam turbine-driven AFW pump (above 50% power) or one motor-driven AFW pump (below 50% power with steam generator low level reactor trip time delay). For 50% power operation and higher, one motor-driven AFW pump is assumed to deliver to the broken MFW header at the pump run-out flow. Sufficient flow would be delivered to the intact steam generator by the redundant motor-driven AFW pump.

For partial power operation (below 50% power with trip time delay active), one motor-driven AFW pump is assumed to fail. All flow from the turbine-driven AFW pump and the redundant motor-driven AFW pump is assumed to deliver to the broken MFW header until the faulted steam generator is isolated by operator action 10 minutes after the break. After isolation of the faulted steam generator, sufficient flow is delivered to the intact steam generator by the turbine-driven and redundant motor-driven AFW pump.

The Engineered Safety Feature Actuation System (ESFAS) automatically actuates the AFW turbine-driven pump and associated valves and controls when required to ensure an adequate feedwater supply to the steam generators during loss of power.

The surveillance requirements (SRs) provide a means of ensuring the AFW system components are capable of supplying required flow to the steam generators, the flow path is aligned correctly, and the automatic functions actuate as designed. The automatic functions are verified through either an actual or simulated actuation signal. The actuation signal associated with SR 4.7.1.2.3 (automatic valve actuation) include the AFW actuation test signal and the low AFW pump suction pressure test signal. The actuation signal associated with SR 4.7.1.2.4 (automatic pump start) includes only the AFW actuation test signal.

Each motor-driven auxiliary feedwater pump (one Train A and one Train B) supplies flow paths to two steam generators. Each flow path contains an automatic air-operated level control valve (LCV). The LCVs have the same train designation as the associated pump and are provided trained air. The turbine-driven auxiliary feedwater pump supplies flow paths to all four steam generators. Each of these flow paths contains an automatic opening (non-modulating) air-operated LCV, two of which are designated as Train A, receive A-train air, and provide flow to the same steam generators that are supplied by the B-train motor-driven auxiliary feedwater pump. The remaining two LCVs are designated as Train B, receive B-

cc:
Mr. O. J. Zeringue, Sr. Vice President
Nuclear Operations
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Dr. Mark O. Medford, Vice President
Engineering & Technical Services
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. D. E. Nunn, Vice President
New Plant Completion
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. R. J. Adney, Site Vice President
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

General Counsel
Tennessee Valley Authority
ET 11H
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. P. P. Carier, Manager
Corporate Licensing
Tennessee Valley Authority
4G Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Ralph H. Shell
Site Licensing Manager
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

TVA Representative
Tennessee Valley Authority
11921 Rockville Pike
Suite 402
Rockville, MD 20852

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 2900
Atlanta, GA 30323

Mr. William E. Holland
Senior Resident Inspector
Sequoyah Nuclear Plant
U.S. Nuclear Regulatory Commission
2600 Igou Ferry Road
Soddy Daisy, TN 37379

Mr. Michael H. Mobley, Director
Division of Radiological Health
3rd Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

County Judge
Hamilton County Courthouse
Chattanooga, TN 37402-2801