

ENCLOSURE 1

PROPOSED CHANGES TO SEQUOYAH NUCLEAR PLANT UNIT 1
TECHNICAL SPECIFICATIONS

8009290280

REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.6.2 Reactor Coolant System leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE,
- b. 1 GPM UNIDENTIFIED LEAKAGE,
- c. 1 GPM total primary-to-secondary leakage through all steam generators and 500 gallons per day through any one steam generator,
- d. 10 GPM IDENTIFIED LEAKAGE from the Reactor Coolant System,
- e. 40 GPM CONTROLLED LEAKAGE at a Reactor Coolant System pressure of 2235 ± 20 psig.
- f. 1 GPM leakage from any Reactor Coolant System Pressure Isolation Valve specified in Table 3.4-1.*

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With any Reactor Coolant System leakage greater than any one of the above limits, excluding PRESSURE BOUNDARY LEAKAGE, and leakage from Reactor Coolant System Pressure Isolation Valves, reduce the leakage rate to within limits within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With any Reactor Coolant System Pressure Isolation Valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two closed manual or deactivated automatic valves, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 Reactor Coolant System leakages shall be demonstrated to be within each of the above limits by:

* Specific exceptions to the 1 GPM leakage limit and the MODE 3 and 4 applicability are listed on Table 3.4-1.

TABLE 3.4-1

REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

| <u>VALVE NUMBER</u> | <u>FUNCTION</u> |
|---------------------|--|
| 63-586 | Boron Injection |
| 63-587 | Boron Injection |
| 63-588 | Boron Injection |
| 63-589 | Boron Injection |
| 63-581 | Boron Injection |
| 63-560 | Accumulator Discharge ⁽¹⁾ |
| 63-561 | Accumulator Discharge ⁽¹⁾ |
| 63-562 | Accumulator Discharge ⁽¹⁾ |
| 63-563 | Accumulator Discharge ⁽¹⁾ |
| 63-622 | Accumulator Discharge |
| 63-623 | Accumulator Discharge |
| 63-624 | Accumulator Discharge |
| 63-625 | Accumulator Discharge |
| 63-551 | Safety Injection (Cold Leg) |
| 63-553 | Safety Injection (Cold Leg) |
| 63-557 | Safety Injection (Cold Leg) |
| 63-555 | Safety Injection (Cold Leg) |
| 63-632 | Residual Heat Removal (Cold Leg) ⁽¹⁾ |
| 63-633 | Residual Heat Removal (Cold Leg) ⁽¹⁾ |
| 63-634 | Residual Heat Removal (Cold Leg) ⁽¹⁾ |
| 63-635 | Residual Heat Removal (Cold Leg) ⁽¹⁾ |
| 63-641 | Residual Heat Removal/Safety Injection (Hot Leg) |
| 63-644 | Residual Heat Removal/Safety Injection (Hot Leg) |
| 63-558 | Safety Injection (Hot Leg) |
| 63-559 | Safety Injection (Hot Leg) |
| 63-543 | Safety Injection (Hot Leg) |
| 63-545 | Safety Injection (Hot Leg) |
| 63-547 | Safety Injection (Hot Leg) |
| 63-549 | Safety Injection (Hot Leg) |
| 63-640 | Residual Heat Removal (Hot Leg) |
| 63-643 | Residual Heat Removal (Hot Leg) |
| 87-558 | Upper Head Injection |
| 87-599 | Upper Head Injection |
| 87-560 | Upper Head Injection |
| 87-561 | Upper Head Injection |
| 87-562 | Upper Head Injection |
| 87-563 | Upper Head Injection |
| FCV-74-1 | Residual Heat Removal ⁽¹⁾⁽²⁾ |
| FCV-74-2 | Residual Heat Removal ⁽¹⁾⁽²⁾ |

- (1) These valves must be tested prior to entering MODE 2.
- (2) The leakage limit for these valves is 3 GPM. This value will be finalized within 30 days of issuance of this amendment.

ENCLOSURE 2

REASONS AND JUSTIFICATIONS FOR PROPOSED CHANGES
TO SEQUOYAH NUCLEAR PLANT UNIT 1
TECHNICAL SPECIFICATIONS

1. Specification 3.4.6.2.f, Page 3/4 4-14

Add a footnote to this specification to note that there are exceptions to the one GPM leakage limit and the requirement to test before entering MODE 4. These exceptions are identified in Table 3.4-1.

2. Table 3.4-1, Page 3/4 4-15a

The leakage test procedure for the cold leg injection line check valves requires that the Reactor Coolant System (RCS) pressure be greater than the cold leg accumulator pressure. The plant must be in MODE 3 to achieve this pressure. The specific test procedures were discussed with A. Schwencer of the NRC staff by telephone on September 23, 1980. The affected check valves are:

| | |
|--------------------------|-------------------------|
| 63-560, -561, -562, -563 | Cold Leg Injection Line |
| 63-632, -633, -634, -635 | RHR Cold Leg |

The Residual Heat Removal (RHR) pumps or two Reactor Coolant Pumps (RCP) must be operating in MODE 5. This is a requirement of technical specification 3.4.1.3. In order to test the RHR supply line valves, the RHR system must be isolated. Two RCP's must be started. The pump heat from the RCP's will cause the RCS to heat up and exceed MODE 5. TVA proposes to test the valves before entering MODE 2 to allow for normal plant heatup and isolation of the RHR system. The affected valves are:

| | |
|-----------------------|-----------------|
| FCV-74-1 and FCV-74-2 | RHR Supply Line |
|-----------------------|-----------------|

The present specification imposes a one GPM leakage limit on the RHR supply line valves FCV-74-1 and FCV-74-2. The baseline extrapolation, based on an ASME low to high pressure test correlation, for FCV-74-1 resulted in an projected leakage of 1.84 GPM at rated system pressure. TVA believes that the test correlation is overly conservative. We request that the leakage limits for FCV-74-1 and FCV-74-2 be increased to three GPM for 30 days. During this period, TVA would make leakage measurements at low pressure and at rated system pressure.

After the data has been analyzed, TVA would like to meet with the NRC to discuss the results and establish a final baseline leakage value for these valves. Without the waiver, the plant would be prohibited from starting up and collecting data at rated system pressure.

Section 5.2.6.1 of Safety Evaluation Report (SER) Supplement No. 2 for Sequoyah states in part that "(L)eakage rates higher than one GPM may be considered acceptable if the leak rate changes are below one GPM above the previous test leak rate." TVA's proposal of a three GPM valve is consistent with the SER statement. The fact that these

valves are gate valves in which valve position is known and that the leakage will be limited to one GPM above a preliminary baseline provides reasonable assurance that the design pressure of the RHR system will not be exceeded thus reducing the probability of an occurrence of an intersystem LOCA. In addition, TVA believes valuable data will be collected which can be used to establish a more effective technical specification.