

TENNESSEE VALLEY AUTHORITY

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FEB 19 1988

U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Gentlemen:

In the Matter of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

SEQUOYAH NUCLEAR PLANT (SQN) UNIT 2 - PLANNED CONTROL ROD MOVEMENT BEFORE RESTART

This letter is being provided to document the control rod movements planned for SQN unit 2 reactor before restart.

Before restart of SQN unit 2, several control rod manipulations will be performed to prove control rod operability and to allow plant evolutions in preparation for restart. During performance of these control rod manipulations, the Reactor Coolant System (RCS) boron concentration will be maintained at greater than or equal to 2,000 parts per million (ppm). Adequate SHUTDOWN MARGIN will be ensured through performance of a shutdown margin calculation, in accordance with Surveillance Instruction (SI) 38, before each of the tests described below.

Each reactor at SQN contains 53 full-length rod cluster control assemblies that are referred to as control rods. These 53 control rods are divided into eight banks of symmetrically arranged control rods--four shutdown banks containing a total of 24 control rods and four control banks containing the remaining 29 control rods.

1. While in mode 5 (RCS temperature less than or equal to 200 degrees Fahrenheit), each control rod will be determined to be OPERABLE by withdrawing each bank of control rods ten steps, by verifying rod movement and rod position indicators (RPIS) operating, and by reinserting the bank to the bottom of the core. This will be accomplished in accordance with SI-11. Each bank will be tested separately with the maximum of nine control rods (control bank D) not being fully inserted at any one time.
2. Upon completion of SI-11, the RCS will be heated to mode 3 (HOT STANDBY). This heatup will be performed while maintaining the RCS boron concentration at greater than or equal to 2,000 ppm with all control rods fully inserted and the reactor trip breakers open.

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FEB 19 1988

3. While in mode 3 with the RCS temperature greater than or equal to 541 degrees Fahrenheit and all reactor coolant pumps operating, the rod drop time of each full-length control rod shall be demonstrated to be less than or equal to 2.2 seconds. This will be accomplished in accordance with SI-43 by fully withdrawing each bank of control rods, dropping each control rod in the bank individually, and recording its drop time. The banks will be tested separately with a maximum of nine control rods (control bank D) not being fully inserted at any one time.
4. While in mode 3 with RCS temperature greater than or equal to 541 degrees Fahrenheit and all reactor coolant pumps running, the RPI for each control rod will be calibrated. This will be accomplished in accordance with SI-67 by withdrawing each bank of control rods, calibrating the RPIs associated with the bank, and reinserting the bank. The banks will be tested separately with a maximum of nine control rods not being fully inserted at any one time (control bank D).

Following Commission approval for restart, the RCS will undergo a control dilution to approximately 1,200 ppm in accordance with General Operating Instruction (GOI) 2. Before this dilution begins, a shutdown margin calculation will be performed in accordance with SI-38. To ensure adequate shutdown reactivity is available, this calculation will ensure the shutdown banks are fully withdrawn. This calculation will be repeated once every 24 hours while in this configuration as required by the technical specifications. As required by GOI-2, the shutdown banks will be fully withdrawn during dilution of the RCS. Upon completion of this dilution, the reactor will be maintained in HOT STANDBY (mode 3) with the RCS boron concentration approximately 1,200 ppm and the shutdown banks fully withdrawn until the unit is restarted.

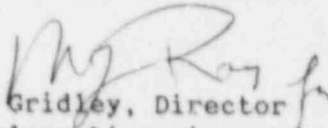
No control rod movements, other than those discussed herein, are planned for SQN unit 2 before restart.

All commitments contained herein are listed in enclosure 1.

If you have any questions, please telephone M. R. Harding at 615/870-6422.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


R. Gridley, Director
Nuclear Licensing and
Regulatory Affairs

Enclosure
cc: See page 2

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FEB 19 1988

cc (Enclosure):

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ENCLOSURE

List of Commitments

1. Reactor coolant system (RCS) heatup from mode 5 (less than or equal to 200 degrees Fahrenheit) to greater than or equal to 541 degrees Fahrenheit in mode 3 will be performed with all control rods fully inserted, the reactor trip breakers open, and the RCS borated to greater than or equal to 2,000 parts per million (ppm).
2. All testing that requires control rod manipulations will be preceded by performance of a shutdown margin calculation in accordance with Surveillance Instruction (SI) 38.
3. During control rod OPERABILITY testing, control rod drop testing, and rod position indication (RPI) calibration, a maximum of nine control rods will be less than fully inserted at any one time during the test.
4. Before the RCS boron concentration is diluted to approximately 1,200 ppm, a shutdown margin calculation will be performed in accordance with SI-38 to ensure adequate shutdown margin is available with all shutdown banks fully withdrawn. This calculation will be repeated once every 24 hours while in this configuration as required by technical specifications.

Upon completion of the RCS dilution per GOI-2, the reactor will be maintained in HOT STANDBY (mode 3) with the RCS boron concentration approximately 1,200 ppm and the shutdown banks fully withdrawn until the unit is restarted.