

EXHIBIT B

Revision No. 1 to License Amendment Request dated May 6, 1980

Exhibit B consists of revised pages of Appendix A Technical Specifications as listed below:

Pages

TS.3.10-1

TS.3.10-2

TS.3.10-3

3.10 CONTROL ROD AND POWER DISTRIBUTION LIMITS

Applicability

Applies to the limits on core fission power distribution and to the limits on control rod operations.

Objective

To assure 1) core subcriticality after reactor trip, 2) acceptable core power distributions during power operation, and 3) limited potential reactivity insertions caused by hypothetical control rod ejection.

Specification

A. Shutdown Reactivity

The shutdown margin with allowance for a stuck control rod assembly shall exceed the applicable value shown in Figure TS.3.10-1 under all steady-state operating conditions, except for physics tests, from zero to full power, including effects of axial power distribution. The shutdown margin as used here is defined as the amount by which the reactor core would be subcritical at hot shutdown conditions if all control rod assemblies were tripped, assuming that the highest worth control rod assembly remained fully withdrawn, and assuming no changes in xenon or boron concentration.

B. Power Distribution Limits

1. At all times, except during low power physics testing, measured hot channel factors, F_Q^N and $F_{\Delta H}^N$, as defined below and in the bases, shall meet the following limits:

$$F_Q^N \times 1.03 \times 1.05 \leq (2.21/P) \times K(Z) \times BU(E_j)$$

$$F_{\Delta H}^N \times 1.04 \leq 1.55 \times [1 + 0.2(1-P)]$$

where the following definitions apply:

- (a) $K(Z)$ is the axial dependence function shown in Figure TS.3.10-5.
- (b) Z is the core height location
- (c) E_j is the maximum pellet exposure in fuel rod j for which the F_Q^N is being measured.
- (d) $BU(E_j)$ is the normalized exposure dependence function for Exxon Nuclear Company fuel shown in Figure TS.3.10-7. For Westinghouse fuel, $BU(E_j) = 1.0$
- (e) P is the fraction of full power at which the core is operating. In the F_Q^N limit determination when $P \leq 0.50$, set $P = 0.50$.

- (f) F_Q^N or $F_{\Delta H}^N$ is defined as the measured F_Q^N or $F_{\Delta H}^N$, respectively, with the smallest margin or greatest excess of limit
 - (g) 1.03 is the engineering hot channel factor, F_Q^E , applied to the measured F_Q^N to account for manufacturing tolerance.
 - (h) 1.05 is applied to the measured F_Q^N to account for measurement uncertainty
 - (i) 1.04 is applied to the measured $F_{\Delta H}^N$ to account for measurement uncertainty
2. Hot channel factors, F_Q^N and $F_{\Delta H}^N$, shall be measured and the target flux difference determined, at equilibrium conditions according to the following conditions, whichever occurs first:
- (a) At least once per 31 effective full-power days in conjunction with the target flux difference determination, or
 - (b) Upon reaching equilibrium conditions after exceeding the reactor power at which target flux difference was last determined, by 10% or more of rated power.

F_Q^N (equil) shall meet the following limit for the middle axial 80% of the core:

$$F_Q^N(\text{equil}) \times V(Z) \times 1.03 \times 1.05 \leq (2.21/P) \times K(Z) \times BU(E_j)$$

where $V(Z)$ is defined in Figure 3.10-8 and other terms are defined in 3.10.B.1 above.

3. (a) If either measured hot channel factor exceeds its limit specified in 3.10.B.1, reduce reactor power and the high neutron flux trip setpoint by 1% for each percent that the measured F_Q^N or $F_{\Delta H}^N$ exceeds the 3.10.B.1 limit. Then follow 3.10.B.3.(c).
- (b) If the measured F_Q^N (equil) exceeds the 3.10.B.2 limits but not the 3.10.B.1 limit, take one of the following actions:
1. Within 48 hours place the reactor in an equilibrium configuration for which Specification 3.10.B.2 is satisfied, or
 2. Reduce reactor power and the high neutron flux trip setpoint by 1% for each percent that the measured F_Q^N (equil) \times 1.03 \times 1.05 \times $V(Z)$ exceeds the $(2.21/P) \times K(Z) \times BU(E_j)$ limit.

- (c) If subsequent in-core mapping cannot, within a 24 hour period, demonstrate that the hot channel factors are met, the reactor shall be brought to a hot shutdown condition with return to power authorized up to 50% power for the purpose of physics testing. Identify and correct the cause of the out of limit condition prior to increasing thermal power above 50%^Npower. Thermal power may then be increased provided F_Q^N or F_H^N is demonstrated through in-core mapping to be within its limits.
- (d) If two successive measurements indicate an increase in the peak pin power $F_{\Delta H}^N$ with exposure, either of the following actions shall be taken:
1. F_Q^N (equil) shall be multiplied by $1.02 \times V(Z) \times 1.03 \times 1.05$ for comparison to the limit specified in 3.10.B.2, or
 2. F_Q^N (equil) shall be measured at least once per seven effective full power days until two successive maps indicate that the peak pin power, $F_{\Delta H}^N$, is not increasing.
4. Except during physics tests, and except as provided by Specifications 5 through 8 below, the indicated axial flux difference for at least three operable excore channels shall be maintained within a +5% band about the target flux difference.
5. Above 90 percent of rated thermal power:
- If the indicated axial flux difference of two operable excore channels deviates from its target band, within 15 minutes either eliminate such deviation, or reduce thermal power to less than 90 percent of rated thermal power.
6. Between 50 and 90 percent of rated thermal power:
- a. The indicated axial flux difference may deviate from its +5% target band for a maximum of one* hour (cumulative) in any 24-hour period provided that the difference between the indicated axial flux difference about the target flux difference does not exceed the envelope shown in Figure TS.3.10-6.
 - b. If 6.a is violated for two operable excore channels then the reactor power shall be reduced to less than 50% power and the high neutron flux setpoint reduced to less than 55% of rated power.

*May be extended to 16 hours during incore/excore calibration.