

15.3.10 CONTROL ROD AND POWER DISTRIBUTION LIMITS

Applicability

Applies to the operation of the control rods and to core power distribution limits.

Objective

To insure (1) core subcriticality after a reactor trip, (2) a limit on potential reactivity insertions from a hypothetical rod cluster control assembly (RCCA) ejection, and (3) an acceptable core power distribution during power operation.

Specification

A. Bank Insertion Limits

1. When the reactor is critical, except for physics tests and control rod exercises, the shutdown banks shall be fully withdrawn.⁽¹⁾
2. When the reactor is critical, the control banks shall be inserted no further than the limits shown by the lines on Figure 15.3.10-1. Exceptions to the insertion limit are permitted for physics tests and control rod exercises.
3. The shutdown margin shall exceed the applicable value as shown in Figure 15.3.10-2 under all steady-state operating conditions from 350° to full power. An exception to the stuck RCCA component of the shutdown margin requirement is permitted for physics tests.
4. Except for physics tests a shutdown margin of at least 1% $\Delta k/k$ shall be maintained when the reactor coolant temperature is less than 350°F.
5. When the reactor is in the hot shutdown condition or during any approach to criticality, except for physics tests, the critical rod position shall not be lower than the insertion limit for zero power. That is, if the control rods were withdrawn in normal sequence with no other reactivity change, the reactor would not be critical until the control banks were above the insertion limit.

(1) Fully withdrawn is defined as a bank demand position equal to or greater than 225 steps. This definition is applicable to shutdown and control banks.

FIGURE 15.3.10-1
CONTROL BANK INSERTION LIMITS
POINT BEACH UNITS 1 AND 2

