2.0 SAFETY LIMITS	LIMITING SAFETY SYSTEM SETTINGS

2.1 FUEL CLADDING INTEGRITY

Applicability

Applies to the interrelated variables associated with fuel thermal behavior

Objective:

To establish limits below which the integrity of the fuel cladding is preserved.

Specification:

A. Core Thermal Power Limit (Reactor Pressure >800 psia and Core Flow is >10% of Rated)

When the reactor pressure is >800 psia and core flow is >10% of rated, the existence of a minimum critical power ratio (MCPR) less than ~~1.07~~ 1.08* for two recirculation loop operation, or less than ~~1.08~~ 1.09* for single loop operation, shall constitute violation of the fuel cladding integrity safety limit.

* MCPR values for cycle 18 only.

2.3 FUEL CLADDING INTEGRITY

Applicability

Applies to trip settings of the instruments and devices which are provided to prevent the reactor system safety limits from being exceeded.

Objective:

To define the level of the process variables at which automatic protective action is initiated to prevent the safety limits from being exceeded.

Specification:

The Limiting safety system settings shall be as specified below:

A. Neutron Flux Scram

1. APRM - The APRM flux scram trip setting shall be:
   a. For two recirculation loop operation (TLO):
      $S \leq 0.66W + 70\%$ where,
      S = Setting in percent of rated thermal power, rated power being 1670 MWT
      W = Percent of the drive flow required to produce a rated core flow of 57.6×10^6 lb/hr
   b. For single recirculation loop operation (SLO):
      $S \leq 0.58(W - 5.\text{-}) + 62\%$
   c. No greater than 120%.

2.0 SAFETY LIMITS

2.1 FUEL CLADDING INTEGRITY

Applicability

Applies to the interrelated variables associated with fuel thermal behavior.

Objective:

To establish limits below which the integrity of the fuel cladding is preserved.

Specification:

A. Core Thermal Power Limit (Reactor Pressure >800 psia and Core Flow is >10% of Rated)

When the reactor pressure is >800 psia and core flow is >10% of rated, the existence of a minimum critical power ratio (MCPR) less than 1.08*, for two recirculation loop operation, or less than 1.09* for single loop operation, shall constitute violation of the fuel cladding integrity safety limit.

* MCPR values for cycle 18 only.

LIMITING SAFETY SYSTEM SETTINGS

2.3 FUEL CLADDING INTERGRITY

Applicability

Applies to trip settings of the instruments and devices which are provided to prevent the reactor system safety limits from being exceeded.

Objective:

To define the level of the process variables at which automatic protective action is initiated to prevent the safety limits from being exceeded.

Specification:

The Limiting safety system settings shall be as specified below:

A. Neutron Flux Scram

1. APRM - The APRM flux scram trip setting shall be:

a. For two recirculation loop operation (TLO):

$$S \leq 0.66W + 70\%$$

where

S = Setting in percent of rated thermal power, rated power being 1670 MWT

W = Percent of the drive flow required to produce a rated core flow of 57.6×10^6 lb/hr

b. For single recirculation loop operation (SLO):

$$S \leq 0.58(W - 5.4) + 62\%$$

c. No greater than 120%.