

**SALEM GENERATING STATION UNIT NOS. 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311
CHANGE TO TECHNICAL SPECIFICATIONS
ENGINEERED SAFETY FEATURES INTERLOCK P-12**

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License No. DPR-70 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
Table 3.3-3	3/4 3-22a
Bases 3/4.1.1.5	B 3/4 1-2

The following Technical Specifications for Facility Operating License No. DPR-75 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
Table 3.3-3	3/4 3-23a
Bases 3/4.1.1.4	B 3/4 1-2

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES INTERLOCKS

<u>DESIGNATION</u>	<u>CONDITION AND SETPOINT</u>	<u>FUNCTION</u>
P-11	With 2 of 3 pressurizer pressure channels ≥ 1925 psig.	P-11 prevents or defeats manual block of safety injection actuation on low pressurizer pressure.
P-12	With 3 of 4 T_{avg} channels $\geq 545^{\circ}\text{F}$ increasing from 543°F (with an allowable setpoint value $\leq 545^{\circ}\text{F}$) With 2 of 4 T_{avg} channels $\leq 541^{\circ}\text{F}$ decreasing from 543°F (with an allowable setpoint value $\geq 541^{\circ}\text{F}$)	P-12 prevents or defeats manual block of safety injection actuation high steam line flow and low steam line pressure. Allows manual block of safety injection actuation on high steam line flow and low steam line pressure. Causes steam line isolation on high steam flow. Affects steam dump blocks.

3/4.1 REACTIVITY CONTROL SYSTEMS

BASES

3/4.1.1.4 MODERATOR TEMPERATURE COEFFICIENT (MTC) (Continued)

The MTC values of this specification are applicable to a specific set of plant conditions; accordingly, verification of MTC values at conditions other than those explicitly stated will require extrapolation to those conditions in order to permit an accurate comparison.

The most negative MTC value equivalent to the most positive moderator density coefficient (MDC), was obtained by incrementally correcting the MDC used in the FSAR analysis to nominal operating conditions. These corrections involved: (1) a conversion of the MDC used in the FSAR analysis to its equivalent MTC, based on the rate of change of moderator density with temperature at RATED THERMAL POWER conditions, and (2) subtracting from this value the largest differences in MTC observed between EOL, all rods withdrawn, RATED THERMAL POWER conditions, and those most adverse conditions of moderator temperature and pressure, rod insertion, axial power skewing, and xenon concentration that can occur in normal operation and lead to a significantly more negative EOL MTC at RATED THERMAL POWER. These corrections transformed the MDC value used in the FSAR analysis into the limiting MTC value of -4.4×10^{-4} delta k/k/°F. The MTC value of -3.7×10^{-4} delta k/k/°F represents a conservative value (with corrections for burnup and soluble boron) at a core condition of 300 ppm equilibrium boron concentration and is obtained by making these corrections to the limiting MTC value -4.4×10^{-4} delta k/k/°F.

The surveillance requirements for measurement of the MTC at the beginning and near the end of the fuel cycle are adequate to confirm that the MTC remains within its limits since this coefficient changes slowly due principally to the reduction in RCS boron concentration associated with fuel burnup.

3/4.1.1.5 MINIMUM TEMPERATURE FOR CRITICALITY

This specification ensures that the reactor will not be made critical with the Reactor Coolant System average temperature less than 541°F. This limitation is required to ensure 1) the moderator temperature coefficient is within its analyzed temperature range, 2) the protective instrumentation is within its normal operating range, 3) the P-12 interlock is above its setpoint, 4) the pressurizer is capable of being in an OPERABLE status with a steam bubble, and 5) the reactor pressure vessel is above its minimum RT_{NDT} temperature.

Available

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES INTERLOCKS

<u>DESIGNATION</u>	<u>CONDITION AND SETPOINT</u>	<u>FUNCTION</u>
P-11	With 2 of 3 pressurizer pressure channels ≥ 1925 psig.	P-11 prevents or defeats manual block of safety injection actuation on low pressurizer pressure.
P-12	<p>With 3 of 4 T_{avg} channels $\geq 545^{\circ}F$ increasing from $543^{\circ}F$ (with an allowable setpoint value $\leq 545^{\circ}F$)</p> <p>With 2 of 4 T_{avg} channels $\leq 541^{\circ}F$ decreasing from $543^{\circ}F$ (with an allowable setpoint value $\geq 541^{\circ}F$)</p>	<p>P-12 prevents or defeats manual block of safety injection actuation high steam line flow and low steam line pressure.</p> <p>Allows manual block of safety injection actuation on high steam line flow and low steam line pressure. Causes steam line isolation on high steam flow. Affects steam dump blocks.</p>

3/4.1 REACTIVITY CONTROL SYSTEMS

BASES

3/4.1.1.3 MODERATOR TEMPERATURE COEFFICIENT (MTC) (Continued)

The MTC values of this specification are applicable to a specific set of plant conditions; accordingly, verification of MTC values at conditions other than those explicitly stated will require extrapolation to those conditions in order to permit an accurate comparison.

The most negative MTC value equivalent to the most positive moderator density coefficient (MDC), was obtained by incrementally correcting the MDC used in the FSAR analysis to nominal operating conditions. These corrections involved: (1) a conversion of the MDC used in the FSAR analysis to its equivalent MTC, based on the rate of change of moderator density with temperature at RATED THERMAL POWER conditions, and (2) subtracting from this value the largest differences in MTC observed between EOL, all rods withdrawn, RATED THERMAL POWER conditions, and those most adverse conditions of moderator temperature and pressure, rod insertion, axial power skewing, and xenon concentration that can occur in normal operation and lead to a significantly more negative EOL MTC at RATED THERMAL POWER. These corrections transformed the MDC value used in the FSAR analysis into the limiting MTC value of -4.4×10^{-4} delta k/k/°F. The MTC value of -3.7×10^{-4} delta k/k/°F represents a conservative value (with corrections for burnup and soluble boron) at a core condition of 300 ppm equilibrium boron concentration and is obtained by making these corrections to the limiting MTC value -4.4×10^{-4} delta k/k/°F.

The surveillance requirements for measurement of the MTC at the beginning and near the end of the fuel cycle are adequate to confirm that the MTC remains within its limits since this coefficient changes slowly due principally to the reduction in RCS boron concentration associated with fuel burnup.

3/4.1.1.4 MINIMUM TEMPERATURE FOR CRITICALITY

This specification ensures that the reactor will not be made critical with the Reactor Coolant System average temperature less than 541°F. This limitation is required to ensure 1) the moderator temperature coefficient is within its analyzed temperature range, 2) the protective instrumentation is within its normal operating range, 3) the P-12 interlock is above its setpoint, 4) the pressurizer is capable of being in an OPERABLE status with a steam bubble, and 5) the reactor pressure vessel is above its minimum RT_{NDT} temperature.

allowable



PSEG

Licensing & Regulation

Fax # (609) 339-1448

Number of Pages (Including cover sheet) _____

DATE: 7/15/96

TO: DON BRINKMAN

LOCATION: NRC

Phone/Fax # _____

FROM: STEVE MANNON

LOCATION: PSEG

Phone: _____

COMMENTS: _____

Transmit Operator: _____

Phone: _____

VERIFICATION #: (609) 339-7031 339-1212

