BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

In MODE 1 or 2, manual initiation of a reactor trip must be OPERABLE. These are the MODES in which the shutdown rods and/or control rods are partially or fully withdrawn from the core. In MODE 3, 4, or 5, the manual initiation Function must also be OPERABLE if one or more shutdown rods or control rods are withdrawn or the Rod Control System is capable of withdrawing the shutdown rods or the control rods. In this condition, inadvertent control rod withdrawal is possible. In MODE 3, 4, or 5, manual initiation of a reactor trip does not have to be OPERABLE if the Rod Control System is not capable of withdrawing the shutdown rods or control rods and if all rods are fully inserted. If the rods cannot be withdrawn from the core, or all of the rods are inserted, there is no need to be able to trip the reactor. In MODE 6, neither the shutdown rods nor the control rods are permitted to be withdrawn and the CRDMs are disconnected from the control rods and shutdown rods. Therefore, the manual initiation Function is not required.

INSERT 4 (1) and (7)

2. Power Range Neutron Flux

The NIS power range detectors are located external to the reactor vessel and measure neutrons leaking from the core. The NIS power range detectors provide input to the Rod Control System and the Steam Generator (SG) Water Level Control System. Therefore, the actuation logic must be able to withstand an input failure to the control system, which may then require the protection function actuation and a single failure in the other channels providing the protection function actuation. Note that this Function also provides a signal to prevent automatic and manual rod withdrawal prior to initiating a reactor trip. Limiting further rod withdrawal may terminate the transient and eliminate the need to trip the reactor.

(12) (1) (1) (12) Stet if these statements are consistent with CNP design.

a. Power Range Neutron Flux - High

The Power Range Neutron Flux - High trip Function ensures that protection is provided, from all power levels, against a positive reactivity excursion leading to DNB during power operations. These can be caused by rod withdrawal or reductions in RCS temperature.

INSERT 5 (1)

The LCO requires all four of the Power Range Neutron Flux - High channels to be OPERABLE.

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

the core to the local heat flux. The DNBR is indicative of the margin to DNB. No credit is taken for the operation of this Function for those rod drop accidents in which the local DNBRs will be greater than the limit. (1)

INSERT 9

The LCO requires all four Power Range Neutron Flux - High Negative Rate channels to be OPERABLE. (1)

In MODE 1 or 2, when there is potential for a multiple rod drop accident to occur, the Power Range Neutron Flux - High Negative Rate trip must be OPERABLE. In MODE 3, 4, 5, or 6, the Power Range Neutron Flux - High Negative Rate trip Function does not have to be OPERABLE because the core is not critical and DNB is not a concern. Also, since only the shutdown banks may be withdrawn in MODE 3, 4, or 5, the remaining complement of control bank worth ensures a sufficient degree of SDM in the event of an REA. In MODE 6, no rods are withdrawn and the required SDM is increased during refueling operations. In addition, the NIS power range detectors cannot detect neutron levels present in this MODE. (1)

4. Intermediate Range Neutron Flux

The Intermediate Range Neutron Flux trip Function ensures that protection is provided against an uncontrolled RCCA bank rod withdrawal accident from a subcritical condition during startup. This trip Function provides redundant protection to the Power Range Neutron Flux - Low Setpoint trip Function. The NIS intermediate range detectors are located external to the reactor vessel and measure neutrons leaking from the core. The NIS intermediate range detectors do not provide any input to control systems. Note that this Function also provides a signal to prevent automatic and manual rod withdrawal prior to initiating a reactor trip. Limiting further rod withdrawal may terminate the transient and eliminate the need to trip the reactor. (1) (12) stet

stet if text consistent w/ design basis

INSERT 10

The LCO requires two channels of Intermediate Range Neutron Flux to be OPERABLE. Two OPERABLE channels are sufficient to ensure no single random failure will disable this trip Function. (1)

Because this trip Function is important only during startup, there is generally no need to disable channels for testing while the Function

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

Allowable Value 5

- axial power distribution - f(ΔI), the Trip Setpoint is varied to account for imbalances in the axial power distribution as detected by the NIS upper and lower power range detectors. If axial peaks are greater than the design limit, as indicated by the difference between the upper and lower NIS power range detectors, the Trip Setpoint is reduced in accordance with Note 1 of Table 3.3.1-1. Allowable Value 5

Dynamic compensation is included for system piping delays from the core to the temperature measurement system.

The Overtemperature ΔT trip Function is calculated for each loop as described in Note 1 of Table 3.3.1-1. Trip occurs if Overtemperature ΔT is indicated in two loops. At some units, the pressure and temperature signals are used for other control functions. For those units, the actuation logic must be able to withstand an input failure to the control system, which may then require the protection function actuation, and a single failure in the other channels providing the protection function actuation. Note that this Function also provides a signal to generate a turbine runback prior to reaching the Trip Setpoint. A turbine runback will reduce turbine power and reactor power. A reduction in power will normally alleviate the Overtemperature ΔT condition and may prevent a reactor trip. 14 1 5 15

stet if statement is consistent w. CNP design

The LCO requires all four channels of the Overtemperature ΔT trip Function to be OPERABLE for two and four loop units (the LCO requires all three channels on the Overtemperature ΔT trip Function to be OPERABLE for three loop units). Note that the Overtemperature ΔT Function receives input from channels shared with other RTS Functions. Failures that affect multiple Functions require entry into the Conditions applicable to all affected Functions. 1

INSERT 12

similar content

In MODE 1 or 2, the Overtemperature ΔT trip must be OPERABLE to prevent DNB. In MODE 3, 4, 5, or 6, this trip Function does not have to be OPERABLE because the reactor is not operating and there is insufficient heat production to be concerned about DNB. 1

7. Overpower ΔT

The Overpower ΔT trip Function ensures that protection is provided to ensure the integrity of the fuel (i.e., no fuel pellet melting and less than 1% cladding strain) under all possible overpower conditions. This trip Function also limits the required range of the 1

against excessive power (fuel rod rating protection)

STET, fuel rods are the first barrier protecting public from radiological release,

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

Overtemperature ΔT trip Function and provides a backup to the Power Range Neutron Flux - High Setpoint trip. The Overpower ΔT trip Function ensures that the allowable heat generation rate (kW/ft) of the fuel is not exceeded. It uses the ΔT of each loop as a measure of reactor power with a setpoint that is automatically varied with the following parameters:

- reactor coolant average temperature - the Trip Setpoint is varied to correct for changes in coolant density and specific heat capacity with changes in coolant temperature, and
- rate of change of reactor coolant average temperature - including dynamic compensation for the delays between the core and the temperature measurement system.

The Overpower ΔT trip Function is calculated for each loop as per Note 2 of Table 3.3.1-1. Trip occurs if Overpower ΔT is indicated in two loops. At some units, the temperature signals are used for other control functions. At those units, the actuation logic must be able to withstand an input failure to the control system, which may then require the protection function actuation and a single failure in the remaining channels providing the protection function actuation. Note that this Function also provides a signal to generate a turbine runback prior to reaching the Allowable Value. A turbine runback will reduce turbine power and reactor power. A reduction in power will normally alleviate the Overpower ΔT condition and may prevent a reactor trip.

The LCO requires four channels for two and four loop units (three channels for three loop units) of the Overpower ΔT trip Function to be OPERABLE. Note that the Overpower ΔT trip Function receives input from channels shared with other RTS Functions. Failures that affect multiple Functions require entry into the Conditions applicable to all affected Functions.

In MODE 1 or 2, the Overpower ΔT trip Function must be OPERABLE. These are the only times that enough heat is generated in the fuel to be concerned about the heat generation rates and overheating of the fuel. In MODE 3, 4, 5, or 6, this trip Function does not have to be OPERABLE because the reactor is not operating and there is insufficient heat production to be concerned about fuel overheating and fuel damage.

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

power operated relief valve (PORV) setting. This setting minimizes challenges to safety valves while avoiding unnecessary reactor trip for those pressure increases that can be controlled by the PORVs.

In MODE 1 or 2, the Pressurizer Pressure - High trip must be OPERABLE to help prevent RCS overpressurization and minimize challenges to the relief and safety valves. In MODE 3, 4, 5, or 6, the Pressurizer Pressure - High trip Function does not have to be OPERABLE because transients that could cause an overpressure condition will be slow to occur. Therefore, the operator will have sufficient time to evaluate unit conditions and take corrective actions. Additionally, low temperature overpressure protection systems provide overpressure protection when below MODE 4.

9. Pressurizer Water Level - High

The Pressurizer Water Level - High trip Function provides a backup signal for the Pressurizer Pressure - High trip and also provides protection against water relief through the pressurizer safety valves. These valves are designed to pass steam in order to achieve their design energy removal rate. A reactor trip is actuated prior to the pressurizer becoming water solid. The LCO requires three channels of Pressurizer Water Level - High to be OPERABLE. The pressurizer level channels are used as input to the Pressurizer Level Control System. A fourth channel is not required to address control/protection interaction concerns. The level channels do not actuate the safety valves, and the high pressure reactor trip is set below the safety valve setting. Therefore, with the slow rate of charging available, pressure overshoot due to level channel failure cannot cause the safety valve to lift before reactor high pressure trip.

In MODE 1, when there is a potential for overfilling the pressurizer, the Pressurizer Water Level - High trip must be OPERABLE. This trip Function is automatically enabled on increasing power by the P-7 interlock. On decreasing power, this trip Function is automatically blocked below P-7. Below the P-7 setpoint, transients that could raise the pressurizer water level will be slow and the operator will have sufficient time to evaluate unit conditions and take corrective actions.

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

In MODE 1 above the P-7 setpoint and below the P-8 setpoint, the RCP Breaker Position (Two Loops) trip must be OPERABLE. Below the P-7 setpoint, all reactor trips on loss of flow are automatically blocked since no conceivable power distributions could occur that would cause a DNB concern at this low power level. Above the P-7 setpoint, the reactor trip on loss of flow in two RCS loops is automatically enabled. Above the P-8 setpoint, a loss of flow in any one loop will actuate a reactor trip because of the higher power level and the reduced margin to the design limit DNBR.

12. Undervoltage Reactor Coolant Pumps

The Undervoltage RCPs reactor trip Function ensures that protection is provided against violating the DNBR limit due to a loss of flow in two or more RCS loops. The voltage to each RCP is monitored. Above the P-7 setpoint, a loss of voltage detected on two or more RCP buses will initiate a reactor trip. This trip Function will generate a reactor trip before the Reactor Coolant Flow - Low (Two Loops) Trip Setpoint is reached. Time delays are incorporated into the Undervoltage RCPs channels to prevent reactor trips due to momentary electrical power transients.

The LCO requires three Undervoltage RCPs channels (one per phase) per bus to be OPERABLE.

In MODE 1 above the P-7 setpoint, the Undervoltage RCP trip must be OPERABLE. Below the P-7 setpoint, all reactor trips on loss of flow are automatically blocked since no conceivable power distributions could occur that would cause a DNB concern at this low power level. Above the P-7 setpoint, the reactor trip on loss of flow in two or more RCS loops is automatically enabled. This Function uses the same relays as the ESFAS Function 6.f, "Undervoltage Reactor Coolant Pump (RCP)" start of the auxiliary feedwater (AFW) pumps.

13. Underfrequency Reactor Coolant Pumps

The Underfrequency RCPs reactor trip Function ensures that protection is provided against violating the DNBR limit due to a loss of flow in two or more RCS loops from a major network frequency disturbance. An underfrequency condition will slow down the pumps, thereby reducing their coastdown time following a pump trip.

Add a basis statement for this allowance

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

INSERT 25

The proper coastdown time is required so that reactor heat can be removed immediately after reactor trip. The frequency of each RCP bus is monitored. Above the P-7 setpoint, a loss of frequency detected on two or more RCP buses will initiate a reactor trip. This trip Function will generate a reactor trip before the Reactor Coolant Flow - Low (Two Loops) Trip Setpoint is reached. Time delays are incorporated into the Underfrequency RCPs channels to prevent reactor trips due to momentary electrical power transients. (1) (7) (1) (1) (1) (5)

INSERT 26

INSERT 27

The LCO requires three Underfrequency RCPs channels per bus to be OPERABLE. only one Function

In MODE 1 above the P-7 setpoint, the Underfrequency RCPs trip must be OPERABLE. Below the P-7 setpoint, all reactor trips on loss of flow are automatically blocked since no conceivable power distributions could occur that would cause a DNB concern at this low power level. Above the P-7 setpoint, the reactor trip on loss of flow in two or more RCS loops is automatically enabled.

14. Steam Generator Water Level - Low Low

(1)

INSERT 27A

these inserts are the same

The SG Water Level - Low Low trip Function ensures that protection is provided against a loss of heat sink and actuates the AFW System prior to uncovering the SG tubes. The SGs are the heat sink for the reactor. In order to act as a heat sink, the SGs must contain a minimum amount of water. A narrow range low low level in any SG is indicative of a loss of heat sink for the reactor. The level transmitters provide input to the SG Level Control System. Therefore, the actuation logic must be able to withstand an input failure to the control system, which may then require the protection function actuation, and a single failure in the other channels providing the protection function actuation. This Function also performs the ESFAS function of starting the AFW pumps on low low SG level. (13) (1) of (7) 6.c, SG Water Level - Low Low

INSERT 28

The LCO requires four three channels of SG Water Level - Low Low per SG to be OPERABLE for four loop units in which these channels are shared between protection and control. In two, three, and four loop units where three SG Water Levels are dedicated to the RTS, only three channels per SG are required to be OPERABLE. (1) (5) (1)

In MODE 1 or 2, when the reactor requires a heat sink, the SG Water Level - Low Low trip must be OPERABLE. The normal

5 **INSERT 28A**
(UNIT 1 only)

Each turbine stop valve includes a limit switch that has two contacts. One contact provides input to Train A while the other contact provides input to Train B. Each contact is considered to be a channel.

5 **INSERT 28A**
(UNIT 2 only)

Each turbine stop valve includes two limit switches. One limit switch provides input to Train A while the other limit switch provides input to Train B. Each limit switch is considered to be a channel.

how will the bases be written to indicate the unit specific basis?

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

INSERT 29 → The LCO requires two trains of SI Input from ESFAS to be OPERABLE in MODE 1 or 2. (1)

A reactor trip is initiated every time an SI signal is present. Therefore, this trip Function must be OPERABLE in MODE 1 or 2, when the reactor is critical, and must be shut down in the event of an accident. In MODE 3, 4, 5, or 6, the reactor is not critical, and this trip Function does not need to be OPERABLE. (2)

18. Reactor Trip System Interlocks

Reactor protection interlocks are provided to ensure reactor trips are in the correct configuration for the current unit status. They back up operator actions to ensure protection system Functions are not bypassed during unit conditions under which the safety analysis assumes the Functions are not bypassed. Therefore, the interlock Functions do not need to be OPERABLE when the associated reactor trip functions are outside the applicable MODES. These are: (2) interlocks

a. Intermediate Range Neutron Flux, P-6 (1)

INSERT 30 → The Intermediate Range Neutron Flux, P-6 interlock is actuated when any NIS intermediate range channel goes approximately one decade above the minimum channel reading. If both channels drop below the setpoint, the permissive will automatically be defeated. The LCO requirement for the P-6 interlock ensures that the following Functions are performed: above the setpoint — 2 need more!

- on increasing power, the P-6 interlock allows the manual block of the NIS Source Range Neutron Flux reactor trip. This prevents a premature block of the source range trip and allows the operator to ensure that the intermediate range is OPERABLE prior to leaving the source range. When the source range trip is blocked, the high voltage to the detectors is also removed. ; and (2) (11) (1)
- on decreasing power, the P-6 interlock automatically energizes the NIS source range detectors and enables the NIS Source Range Neutron Flux reactor trip; and INSERT 31 (1) (2)
- on increasing power, the P-6 interlock provides a backup block signal to the source range flux doubling circuit. (1)

B 3.3.1

(1)

INSERT 29

There are two ~~trains of~~ SI input from ESFAS arranged in a one-out-of-two logic.

signals

(1)

INSERT 30

There are two Intermediate Range Neutron Flux, P-6 interlock channels (1 per train). Each channel receives input from two NIS intermediate range channels. Each P-6 interlock channel actuates to provide the interlock function for its associated RTS logic train.

(1)

INSERT 31

(i.e., defeats the manual block).

need more
not much of a basis statement

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

e. Turbine Impulse Pressure, P-13 (5)

INSERT 36 First Stage

The Turbine Impulse Pressure, P-13 interlock is actuated when the pressure in the first stage of the high pressure turbine is greater than approximately 10% of the rated full power pressure. This is determined by one-out-of-two pressure detectors. The LCO requirement for this Function ensures that one of the inputs to the P-7 interlock is available. (1) (1)

the setpoint

The LCO requires two channels of Turbine Impulse Pressure, P-13 interlock to be OPERABLE in MODE 1. (1) (5)

First Stage

The Turbine Impulse Chamber Pressure, P-13 interlock must be OPERABLE when the turbine generator is operating. The interlock Function is not required OPERABLE in MODE 2, 3, 4, 5, or 6 because the turbine generator is not operating. (5)

19. Reactor Trip Breakers

INSERT 37

This trip Function applies to the RTBs exclusive of individual trip mechanisms. The LCO requires two OPERABLE trains of trip breakers. A trip breaker train consists of all trip breakers associated with a single RTS logic train that are racked in, closed, and capable of supplying power to the Rod Control System. Thus, the train may consist of the main breaker, bypass breaker, or main breaker and bypass breaker, depending upon the system configuration. Two OPERABLE trains ensure no single random failure can disable the RTS trip capability. (1)

These trip Functions must be OPERABLE in MODE 1 or 2 when the reactor is critical. In MODE 3, 4, or 5, these RTS trip Functions must be OPERABLE when the Rod Control System is capable of rod withdrawal or one or more rods are not fully inserted.

20. Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms

INSERT 38

The LCO requires both the Undervoltage and Shunt Trip Mechanisms to be OPERABLE for each RTB that is in service. The trip mechanisms are not required to be OPERABLE for trip breakers that are open, racked out, incapable of supplying power to the Rod Control System, or declared inoperable under Function 19 above. OPERABILITY of both trip mechanisms on each breaker ensures

<TSTF-418 not shown> (16)

BASES

SURVEILLANCE REQUIREMENTS (continued)

relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions.

Setpoints must be within the Allowable Values specified in Table 3.3.1-1.

The difference between the current "as found" values and the previous test "as left" values must be consistent with the drift allowance used in the setpoint methodology. The setpoint shall be left set consistent with the assumptions of the current unit specific setpoint methodology.

The "as found" and "as left" values must also be recorded and reviewed for consistency with the assumptions of Reference 7. (8) (1) <TSTF-411 changes not shown>

SR 3.3.1.7 is modified by a Note that provides a 4 hours delay in the requirement to perform this Surveillance for source range instrumentation when entering MODE 3 from MODE 2. This Note allows a normal shutdown to proceed without a delay for testing in MODE 2 and for a short time in MODE 3 until the RTBs are open and SR 3.3.1.7 is no longer required to be performed. If the unit is to be in MODE 3 with the RTBs closed for > 4 hours this Surveillance must be performed prior to 4 hours after entry into MODE 3. (5)

The Frequency of [92] days is justified in Reference 8. (4) (1)

SR 3.3.1.8 (10) every 184 days INSERT 48 (5)

SR 3.3.1.8 is the performance of a COT as described in SR 3.3.1.7, except it is modified by a Note that this test shall include verification that the P-6 and P-10 interlocks are in their required state for the existing unit condition. A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL OPERATIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. The Frequency is modified by a Note that allows this surveillance to be satisfied if it has been performed within [92] days of the Frequencies prior to reactor startup and four hours after reducing power below P-10 and P-6. The Frequency of "prior to startup" ensures this surveillance is performed prior to critical operations and applies to the source, intermediate and power range low instrument channels. The Frequency of [12] hours after reducing power

(10) INSERT 49 (OT) (2) (10) INSERT 49A (5) INSERT 50 (4)

Revise pending RAI resolution

BASES

SURVEILLANCE REQUIREMENTS (continued)

verifies that the channel responds to a measured parameter within the necessary range and accuracy.

CHANNEL CALIBRATIONS must be performed consistent with the assumptions of the unit specific setpoint methodology. The difference between the current "as found" values and the previous test "as left" values must be consistent with the drift allowance used in the setpoint methodology.

The Frequency of 18 months is based on the assumption of an 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint methodology. 4

SR 3.3.1.10 is modified by a Note stating that this test shall include verification that the time constants are adjusted to the prescribed values where applicable. 5

SR 3.3.1.11 5

SR 3.3.1.11 is the performance of a CHANNEL CALIBRATION, as described in SR 3.3.1.10, every 18 months. This SR is modified by a Note stating that neutron detectors are excluded from the CHANNEL CALIBRATION. The CHANNEL CALIBRATION for the power range neutron detectors consists of a normalization of the detectors based on a power calorimetric and flux map performed above 15% RTP. The CHANNEL CALIBRATION for the source range and intermediate range neutron detectors consists of obtaining the detector plateau or preamp discriminator curves, evaluating those curves, and comparing the curves to the manufacturer's data. This Surveillance is not required for the NIS power range detectors for entry into MODE 2 or 1, and is not required for the NIS intermediate range detectors for entry into MODE 2, because the unit must be in at least MODE 2 to perform the test for the intermediate range detectors and MODE 1 for the power range detectors. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed on the 18 month Frequency. 4

SR 3.3.1.12 5

Attachment 1, Volume 8, Rev. 0, Page 201 of 818

(10) **INSERT 54**

CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor.

(5) **INSERT 55**

Changes in power range neutron detector sensitivity are compensated for by normalization of the channel output based on a power calorimetric and flux map performed above 15% RTP (SR 3.3.1.2). Changes in intermediate range neutron flux detector sensitivity are compensated for by periodically evaluating the compensating voltage setting and making adjustments as necessary. Changes in source range neutron detector sensitivity are compensated for by periodically obtaining the detector plateau or preamp discriminator curves, evaluating those curves, comparing the curves to the manufacturer's data, and adjusting the channel output as necessary.

what's the purpose of this basis in regard to CH CAL?

(5) **INSERT 56**

This SR is modified by two Notes.

(5) **INSERT 57** hold pending LCO RA-1 on JTD (9)

Note 2 provides a 72 hour delay in the requirement to perform a normalization of the ΔT channels after THERMAL POWER is ≥ 98% RTP.

<TSTF-418 not shown> (1C)

BASES

SURVEILLANCE REQUIREMENTS (continued)

(24) As appropriate, each channel's response must be verified every 18 months on a STAGGERED TEST BASIS. Testing of the final actuation devices is included in the testing. Response times cannot be determined during unit operation because equipment operation is required to measure response times. Experience has shown that these components usually pass this surveillance when performed at the (24) 18 months Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint. (4) (1) (5)

(19) SR 3.3.1.16 is modified by a Note stating that neutron detectors are excluded from RTS RESPONSE TIME testing. This Note is necessary because of the difficulty in generating an appropriate detector input signal. Excluding the detectors is acceptable because the principles of detector operation ensure a virtually instantaneous response. (5)

INSERT 59 (1)

REFERENCES

INSERT 6D (1)

1. FSAR, Chapter [7].
2. FSAR, Chapter [6].
3. FSAR, Chapter [15].
4. IEEE-279-1971.
5. 10 CFR 50.49.
6. RTS/ESFAS Setpoint Methodology Study.
7. WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.
8. Technical Requirements Manual, Section 15, "Response Times."
9. (T3) WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," January 1996. (1) (4)
10. (14) WCAP-14036-P, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests," December 1995. (1) (4)

provide citations for CNP SER approval

1

INSERT 59

The response time testing of the neutron flux signal portion of the channel shall be measured from either the detector output or the input of the first electronic component in the channel.

1

INSERT 60

1. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety Related Instrumentation."
2. UFSAR, Chapter 7.
3. Technical Requirements Manual.
4. IEEE-279, "Proposed Criteria for Nuclear Power Plant Protection Systems," August 1968.
5. UFSAR, Table 7.2-1.
6. UFSAR, Table 14.1-2 (Unit 1) and UFSAR, Table 14.1.0-4 (Unit 2).
7. 10 CFR 50.49.
8. EG-IC-004, "Instrument Setpoint Uncertainty," Rev. 4.
9. UFSAR, Chapter 14.
10. WCAP-10271-P-A, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," including Supplement 1, May 1986, and Supplement 2, Rev.1, June 1990.
11. WCAP-15376, "Risk-Informed Assessment of the RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times," October 2000. TSTF-411
12. UFSAR, Table 7.2-6.

Is this citation a change to current commitments?

Is this approved by NRC staff?

Insert Page B 3.3.1-54

JUSTIFICATION FOR DEVIATIONS
ITS 3.3.1 BASES, REACTOR TRIP SYSTEM INSTRUMENTATION

1. Changes are made (additions, deletions, and/or changes) to the ISTS Bases, which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.

2. Grammatical/editorial error corrected.

3. The Note, describing an alternative Technical Specification format with respect to Allowable Values and Trip Setpoints, is deleted because it is not intended to be included in the plant specific ITS submittal.

4. The brackets have been removed and the proper plant specific information/value has been provided.

5. Changes are made to reflect changes made to the Specification.

6. Spelling error corrected.

7. Changes are made to reflect the Specifications.

8. The Reviewer's Notes are deleted because they are not intended to be included in the plant specific ITS submittal.

9. The discussion in ISTS SR 3.3.1.11 (ITS SR 3.3.1.14) about the normalization of the power range neutron detectors has been deleted since the adjustment is part of ISTS SR 3.3.1.2 (ITS SR 3.3.1.2). — Need to repeat it here bec. SR (2) does not apply to T3.3.1-1, F. 3 (PRNF Rate), ITS SR (14) applies rather

10. Changes are made for consistency with other places of the Bases.

11. These punctuation corrections have been made consistent with the Writer's Guide for the Improved Standard Technical Specifications, NEI 01-03, Section 5.1.3.

12. This statement has been deleted since the Power Range Neutron Flux and Intermediate Range Neutron Flux instrumentation are not assumed in the accident analyses to prevent automatic or manual rod withdrawal.

statements of design are deleted, not analysis basis. (copy)

13. This statement has been deleted since this feature is not required for OPERABILITY of the Steam Generator Water Level - Low Low RTS Function.

14. This statement has been deleted since it is not relevant to the discussion.

15. This statement has been deleted since this feature is not assumed in the safety analyses.

16. TSTF-418, Rev. 2, which incorporates WCAP-14333, has not been adopted.