

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

February 27, 2002

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No.: 02-129
CM/RAB R0
Docket Nos.: 50-338
50-339
License Nos.: NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNITS 1 AND 2
PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS)
ITS 3.3.1, DECALIBRATION ISSUE (TAC MB2074)
ITS 3.9.1 BASES CHANGE
CHANGES NOT ASSOCIATED WITH REQUESTS FOR ADDITIONAL INFORMATION

This letter transmits revisions to the North Anna Power Station (NAPS) Units 1 and 2 proposed Improved Technical Specifications (ITS). The North Anna ITS license amendment request was submitted to the NRC in a December 11, 2000 letter (Serial No. 00-606). This includes our resolution to TAC MB2074, which concerns the decalibration effects of calorimetric power measurements on the Nuclear Instrumentation high power reactor trip at lower power levels. This resolution was accepted by the NRC in a telephone call. This letter also includes a change to the Bases of ITS 3.9.1, which was requested verbally by a member of your staff. Additionally, six changes that are not associated with beyond scope issues or requests for additional information are included in the attachment to this letter.

The attachment includes a summary of each change and the revised pages of the submittal.

If you have any further questions or require additional information, please contact us.

Very truly yours,



Eugene S. Grecheck
Vice President - Nuclear Support Services

Attachment

Commitments made in this letter: None

A001

cc: U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Suite 23T85
Atlanta, Georgia 30303-8931

Mr. Tommy Le
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Stop 12 H4
Rockville, MD 20852-2738

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

Commissioner (w/o attachments)
Bureau of Radiological Health
1500 East Main Street
Suite 240
Richmond, VA 23218

Mr. J. E. Reasor, Jr. (w/o attachments)
Old Dominion Electric Cooperative
Innsbrook Corporate Center
4201 Dominion Blvd.
Suite 300
Glen Allen, Virginia 23060

Attachment

**Proposed Improved Technical Specifications
Resolution of TAC MB2074
ITS 3.9.1 BASES CHANGE**

**Virginia Electric and Power Company
(Dominion)**

North Anna Power Station Units 1 and 2

**Responses to NRC Requests for Additional Information
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and
Application," and ITS 3.3, "Instrumentation"**

MB2074: NUREG-1431, Revision 1, SR 3.3.1.2, requires comparing the results of a calorimetric heat balance calculation to the Nuclear Instrumentation System (NIS) channel output every 24 hours and adjusting the NIS channel if the absolute difference is $> 2\%$. Westinghouse Technical Bulletin ESBU-TB-92-14-R1, "Decalibration Effects of Calorimetric Power Measurements on the NIS High Power Reactor Trip at Power Levels Less than 70% RTP," documents an issue regarding non-conservative High Power reactor trip settings due to adjusting the NIS channels to agree with calorimetric calculations taken at less than full power. In the ITS submittal, the Company proposed a revision to SR 3.3.1.2 to address this issue which only required adjustment of the NIS channel output if the calorimetric power calculation was greater than the NIS reading by $> 2\%$. In parallel with the North Anna ITS submittal, the Westinghouse Owners Group proposed a generic change to the ITS NUREGs to address the issue. This change, TSTF-371 Revision 1, has been provided to the NRC. The NRC reviewed a draft of TSTF-371 Revision 1 and requested that the Company incorporate it into the North Anna ITS. The changes to SR 3.3.1.2 proposed by TSTF-371 Revision 1 are consistent with those proposed in the North Anna ITS submittal. TSTF-371, Revision 1 revises SR 3.3.1.3 to move information from a Note to the SR text to be consistent with the presentation of SR 3.3.1.2. This does not affect the intent of SR 3.3.1.3. The Unit 1 CTS markup is revised to add DOC L.7 to the addition of SR 3.3.1.2. The Unit 2 CTS markup currently contains a reference to DOC L.7.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
R. One or more channels inoperable.	R.1 Verify interlock is in required state for existing unit conditions.	1 hour
	<u>OR</u> R.2 Be in MODE 2.	7 hours
S. One trip mechanism inoperable for one RTB.	S.1 Restore inoperable trip mechanism to OPERABLE status.	48 hours
	<u>OR</u> S.2 Be in MODE 3.	54 hours

SURVEILLANCE REQUIREMENTS

----- NOTE -----
Refer to Table 3.3.1-1 to determine which SRs apply for each RTS Function.

SURVEILLANCE	FREQUENCY
SR 3.3.1.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.1.2 -----NOTE----- Not required to be performed until 12 hours after THERMAL POWER is $\geq 15\%$ RTP. ----- Compare results of calorimetric heat balance calculation to power range channel output. Adjust power range output if calorimetric heat balance calculation result exceeds power range channel output by more than +2% RTP.	24 hours

MB 2074
R17

MB 2074
R17

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY	
<p>SR 3.3.1.3 -----NOTE----- Not required to be performed until 72 hours after THERMAL POWER is \geq 15% RTP. -----</p> <p>Compare results of the incore detector measurements to Nuclear Instrumentation System (NIS) AFD. Adjust NIS channel if absolute difference is \geq 3%.</p>	<p>31 effective full power days (EFPD)</p>	<p>MB 2074 R17 RAIs MB 1433 MB 1427 R8, R15 3.3.1-39 R5, R15</p> <p>MB 2074 R17</p>
<p>SR 3.3.1.4 -----NOTE----- This Surveillance must be performed on the reactor trip bypass breaker immediately after placing the bypass breaker in service. -----</p> <p>Perform TADOT.</p>	<p>31 days on a STAGGERED TEST BASIS</p>	
<p>SR 3.3.1.5 Perform ACTUATION LOGIC TEST.</p>	<p>31 days on a STAGGERED TEST BASIS</p>	
<p>SR 3.3.1.6 -----NOTE----- Verification of setpoint is not required. -----</p> <p>Perform TADOT.</p>	<p>92 days</p>	<p>RAIs MB 1433 MB 1427 R8 3.3.1-39 R5</p>
<p>SR 3.3.1.7 -----NOTE----- Not required to be performed for source range instrumentation prior to entering MODE 3 from MODE 2 until 4 hours after entry into MODE 3. -----</p> <p>Perform COT.</p>	<p>92 days</p>	

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.1.2

SR 3.3.1.2 compares the calorimetric heat balance calculation to the power range channel output every 24 hours. If the calorimetric heat balance calculation results exceeds the power range channel output by more than +2% RTP, the power range channel is not declared inoperable, but must be adjusted. The power range channel output shall be adjusted consistent with the calorimetric heat balance calculation results if the calorimetric calculation exceeds the power range channel output by more than +2% RTP. If the power range channel output cannot be properly adjusted, the channel is declared inoperable.

MB 2074
R17

If the calorimetric is performed at part power (< 85% RTP), adjusting the power range channel indication in the increasing power direction will assure a reactor trip below the safety analysis limit (< 118% RTP). Making no adjustment to the power range channel in the decreasing power direction due to a part power calorimetric assures a reactor trip consistent with the safety analyses.

MB 2074
R17

This allowance does not preclude making indicated power adjustments, if desired, when the calorimetric heat balance calculation power is less than the power range channel output. To provide close agreement between indicated power and to preserve operating margin, the power range channels are normally adjusted when operating at or near full power during steady-state conditions. However, discretion must be exercised if the power range channel output is adjusted in the decreasing power direction due to a part power calorimetric (< 85% RTP). This action may introduce a non-conservative bias at higher power levels which may result in an NIS reactor trip above the safety analysis limit (> 118% RTP). The cause of the non-conservative bias is the decreased accuracy of the calorimetric at reduced power conditions. The primary error contributor to the instrument uncertainty for a secondary side power calorimetric measurement is the feedwater flow measurement, which is typically a ΔP measurement across a feedwater venturi. While the measurement uncertainty remains constant in ΔP as power decreases, when translated into flow, the uncertainty increases as a square term. Thus a 1% flow error at 100% power can approach a 10% flow error at 30% RTP even though the ΔP error has not changed. An evaluation of extended operation at part power conditions would conclude that it is prudent to administratively adjust the setpoint of the Power

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.1.2 (continued)

Range Neutron Flux-High bistables when: (1) the power range channel output is adjusted in the decreasing power direction due to a part power calorimetric below 85% RTP; or (2) for a post refueling startup. The evaluation of extended operation at part power conditions would also conclude that the potential need to adjust the indication of the Power Range Neutron Flux in the decreasing power direction is quite small, primarily to address operation in the intermediate range about P-10 (nominally 10% RTP) to allow the enabling of the Power Range Neutron Flux-Low Setpoint and the Intermediate Range Neutron Flux reactor trips. Before the Power Range Neutron Flux-High bistables are reset to $\leq 109\%$ RTP, the power range channel output must be confirmed based on a calorimetric performed at $\geq 85\%$ RTP.

MB 2074
R17

The Note clarifies that this Surveillance is required only if reactor power is $\geq 15\%$ RTP and that 12 hours are allowed for performing the first Surveillance after reaching 15% RTP. A power level of 15% RTP is chosen based on plant stability, i.e., automatic rod control capability and turbine generator synchronized to the grid.

MB 2074
R17

The Frequency of every 24 hours is adequate. It is based on unit operating experience, considering instrument reliability and operating history data for instrument drift. Together these factors demonstrate that a difference between calorimetric heat balance calculation and the power range channel output of more than +2% RTP is not expected in any 24 hour period.

MB 2074
R17

In addition, control room operators periodically monitor redundant indications and alarms to detect deviations in channel outputs.

SR 3.3.1.3

SR 3.3.1.3 compares the incore system to the NIS channel output every 31 EFPD. If the absolute difference is $\geq 3\%$, the NIS channel is still OPERABLE, but it must be readjusted. The excore NIS channel shall be adjusted if the absolute difference between the incore and excore AFD is $\geq 3\%$. The adjustment is a recalibration of the upper and lower Power Range detectors to incorporate the results of the flux map.

R17
RAIs
MB 1433
MB 1427
R8, R15
3.3.1-39
R5, R15

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.1.3 (continued)

If the NIS channel cannot be properly readjusted, the channel is declared inoperable. This Surveillance is performed to verify the $f(\Delta I)$ input to the overtemperature ΔT Function.

RAIs
MB 1433
MB 1427
R8, R15
3.3.1-39
R5, R15

A Note clarifies that the Surveillance is required only if reactor power is $\geq 15\%$ RTP and that 72 hours is allowed for performing the first Surveillance after reaching 15% RTP.

R17
RAIs
MB 1433
MB 1427
R8, 15
3.3.1-39
R5, 15

The Frequency of every 31 EFPD is adequate. It is based on unit operating experience, considering instrument reliability and operating history data for instrument drift. Also, the slow changes in neutron flux during the fuel cycle can be detected during this interval.

RAIs
MB 1433
MB 1427
R8, 15
3.3.1-39
R5, 15

SR 3.3.1.4

SR 3.3.1.4 is the performance of a TADOT every 31 days on a STAGGERED TEST BASIS. This test shall verify OPERABILITY by actuation of the end devices. 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 TADOT 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 RTB test shall include separate verification of the undervoltage and shunt trip mechanisms. Independent verification of RTB undervoltage and shunt trip Function is not required for the bypass breakers. No capability is provided for performing such a test at power. The independent test for bypass breakers is included in SR 3.3.1.14. The test of the bypass breaker is a local shunt trip actuation. A Note has been added to indicate that this test must be performed on the bypass breaker. The local manual shunt trip of the RTB bypass shall be conducted immediately after placing the bypass breaker into service. This test must be conducted prior to the start of testing on the RTS or maintenance on a RTB. This checks the mechanical operation of the bypass breaker.

R5
R12

(continued)

CTS

SURVEILLANCE REQUIREMENTS

.....NOTE.....
Refer to Table 3.3.1-1 to determine which SRs apply for each RTS Function.
.....

	SURVEILLANCE	FREQUENCY	
Channel Check	SR 3.3.1.1 Perform CHANNEL CHECK.	12 hours	
Channel Calibration	<p>SR 3.3.1.2</p> <p>.....NOTE.....</p> <p>1. Adjust NIS channel if absolute difference is $\geq 2\%$.</p> <p>2. Not required to be performed until 12 hours after THERMAL POWER is $\geq 15\%$ RTP.</p> <p>Compare results of calorimetric heat balance calculation to Nuclear Instrumentation System (NIS) channel output.</p>	24 hours	<p>TSTF-371</p> <p>MB 2074 R17</p> <p>7</p> <p>MB 2074 R17</p>
Channel Calibration	<p>SR 3.3.1.3</p> <p>.....NOTE.....</p> <p>1. Adjust NIS channel if absolute difference is $\geq 3\%$.</p> <p>2. Not required to be performed until 72 hours after THERMAL POWER is $\geq 15\%$ RTP.</p> <p>Compare results of the incore detector measurements to NIS AFD.</p>	31 effective full power days (EFPD)	<p>TSTF-371</p> <p>MB 2074 R17</p> <p>18</p> <p>MB1433 MB1427 RAI 3.3.1-39 R5, R8, R15 MB2074</p> <p>TSTF-371 R17</p>

power range channel output. Adjust power range output if calorimetric heat balance calculation results exceed power range channel output by more than +2% RTP.

Nuclear Instrumentation system (NIS)

(continued)

JUSTIFICATION FOR DEVIATIONS ITS 3.3.1, RTS INSTRUMENTATION

1. ISTS Function 11 in Table 3.3.1-1 for Reactor Coolant Pump (RCP) Breaker Position requires the single loop function to be applicable in MODE 1 above the P-7 setpoint. With a channel inoperable, Action M must be entered and requires the inoperable channel to be placed in trip within 6 hours, or reduce THERMAL POWER to < P-8, within 10 hours. The two-loop requirement is applicable in MODE 1 above the P-7 and below the P-8 setpoint. Action L must be entered and requires an inoperable channel to be placed in trip within 6 hours, or reduce THERMAL POWER to < P-7," within 12 hours. ITS RCP Breaker Position is function 11 and requires the function to be OPERABLE in MODE 1^(f). Note f states, "Above the P-7 (Low Power Reactor Trips Block) interlock. This changes the ISTS requirements by combining the single loop and two loop requirements. Note ^(h) to the ISTS in Table 3.3.1-1 is not used. This change is necessary because the channels for breaker position are shared between the single and two loop requirements. The changes reflect the CTS requirements.
2. Editorial change made for enhanced clarity or to be consistent with the ISTS Writers Guide.
3. ITS Actions D, E, L, M, N, and O are modified to reflect the CTS completion time requirements. The allowances for testing conditions provided by Notes to the Required Actions are also modified to reflect the CTS requirements in ITS Actions D, E, L, M, and P. These changes are consistent with the CTS and are supported by WCAP-10271 and WCAP-14333.
4. Not Used.
5. ISTS SR 3.3.1.4 requires the performance of a TADOT. A Note to the requirement specifies, "This Surveillance must be performed on the reactor trip bypass breaker prior to placing the bypass breaker in service." North Anna CTS, Table 4.3-1, Note 9, allows the reactor trip bypass breaker to be tested immediately after placing the bypass breaker in service. To be consistent with the CTS, the Note to ITS SR 3.3.1.4 is modified to state, "This Surveillance must be performed on the reactor trip bypass breaker immediately after placing the bypass breaker in service." This change was made to the CTS to reduce the risk of damaging the reactor trip bypass breakers during testing by eliminating the need to rack out and rack in the reactor trip bypass breaker for testing.

MB2074
R17

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.1.1

Performance of the CHANNEL CHECK once every 12 hours ensures that gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the unit staff based on a combination of the channel instrument uncertainties, including indication and readability. If a channel is outside the criteria, it may be an indication that the sensor or the signal processing equipment has drifted outside its limit.

The Frequency is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the LCO required channels.

SR 3.3.1.2

SR 3.3.1.2 compares the calorimetric heat balance calculation to the NIS channel output every 24 hours. If the calorimetric exceeds the NIS channel output by $\geq 2\%$ RTP, the NIS is not declared inoperable, but must be adjusted. If the NIS channel output cannot be properly adjusted, the channel is declared inoperable.

heat balance calculation results

power range channel

power range

Insert 2

power range

more than 2

Insert 1

Two Notes modify SR 3.3.1.2. The first Note indicates that the NIS channel output shall be adjusted consistent with the calorimetric results if the absolute difference between the NIS channel output and the calorimetric is $> 2\%$ RTP. The second Note clarifies that this Surveillance is required only if reactor power is $\geq 15\%$ RTP and that 12 hour.

AMB
2074

TSTF-
371 R17

(continued)

Rev 1/7

ITS 3.3.1, RTS INSTRUMENTATION

INSERT 1

The power range channel output shall be adjusted consistent with the calorimetric heat balance calculation results if the calorimetric calculation exceeds the power range channel output by more than +2% RTP.

INSERT 2

If the calorimetric is performed at part power (< 85% RTP), adjusting the power range channel indication in the increasing power direction will assure a reactor trip below the safety analysis limit (< 118% RTP). Making no adjustment to the power range channel in the decreasing power direction due to a part power calorimetric assures a reactor trip consistent with the safety analyses.

This allowance does not preclude making indicated power adjustments, if desired, when the calorimetric heat balance calculation power is less than the power range channel output. To provide close agreement between indicated power and to preserve operating margin, the power range channels are normally adjusted when operating at or near full power during steady-state conditions. However, discretion must be exercised if the power range channel output is adjusted in the decreasing power direction due to a part power calorimetric (< 85% RTP). This action may introduce a non-conservative bias at higher power levels which may result in an NIS reactor trip above the safety analysis limit (> 118% RTP). The cause of the non-conservative bias is the decreased accuracy of the calorimetric at reduced power conditions. The primary error contributor to the instrument uncertainty for a secondary side power calorimetric measurement is the feedwater flow measurement, which is typically a ΔP measurement across a feedwater venturi. While the measurement uncertainty remains constant in ΔP as power decreases, when translated into flow, the uncertainty increases as a square term. Thus a 1% flow error at 100% power can approach a 10% flow error at 30% RTP even though the ΔP error has not changed. An evaluation of extended operation at part power conditions would conclude that it is prudent to administratively adjust the setpoint of the Power Range Neutron Flux - High bistables to $\leq 185\%$ RTP when: 1) the power range channel output is adjusted in the decreasing power direction due to a part power calorimetric below 85% RTP; or 2) for a post refueling startup. The evaluation of extended operation at part power conditions would also conclude that the potential need to adjust the indication of the Power Range Neutron Flux in the decreasing power direction is quite small, primarily to address operation in the intermediate range about P-10 (nominally 10% RTP) to allow the enabling of the Power Range Neutron Flux - Low Setpoint and the Intermediate Range Neutron Flux reactor trips. Before the Power Range Neutron Flux - High bistables are reset to $\leq 109\%$ RTP, the power range channel output must be confirmed based on a calorimetric performed at $\geq 85\%$ RTP.

MB2074
R17

20

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.1.2 (continued)

allowed for performing the first Surveillance after reaching 15% RTP. At lower power levels, calorimetric data are inaccurate.

Insert 2

MB2074

The Frequency of every 24 hours is adequate. It is based on unit operating experience, considering instrument reliability and operating history data for instrument drift. Together these factors demonstrate the change in the absolute difference between NIS and heat balance calculated powers rarely exceeds 2% in any 24 hour period.

TSTF-371 R17

Calculation

In addition, control room operators periodically monitor redundant indications and alarms to detect deviations in channel outputs.

RAI
MB 1433
MB 1427
R5, R15 R8, R15

SR 3.3.1.3

SR 3.3.1.3 compares the incore system to the NIS channel output every 31 EFPD. If the absolute difference is $\geq 3\%$, the NIS channel is still OPERABLE, but must be readjusted.

INSERT 3
R17
MB2074

If the NIS channel cannot be properly readjusted, the channel is declared inoperable. This Surveillance is performed to verify the f(ΔI) input to the overtemperature ΔT Function.

Two Notes modify SR 3.3.1.3. Note 1 indicates that the excore NIS channel shall be adjusted if the absolute difference between the incore and excore AFD is $\geq 3\%$.

TSTF-371 R17
MB 2074

A note

NOTE 2 clarifies that the Surveillance is required only if reactor power is $\geq 15\%$ RTP and that 24 hours is allowed for performing the first Surveillance after reaching 15% RTP.

① ②
①

The Frequency of every 31 EFPD is adequate. It is based on unit operating experience, considering instrument reliability and operating history data for instrument drift. Also, the slow changes in neutron flux during the fuel cycle can be detected during this interval.

(continued)

Rev 17

ITS 3.3.1, RTS INSTRUMENTATION

INSERT 1

The adjustment is a recalibration of the upper and lower Power Range detectors to incorporate the results of the flux map.

MB1433
MB1427
RB
RAZ 3.3.1-39
RS

INSERT 2

A power level of 15% RTP is chosen based on plant stability, i.e., automatic rod control capability and turbine generator synchronized to the grid.

MB2074
R17

MB1433
MB1427
RB, R15
RAZ 3.3.1-39
RS, R15

JUSTIFICATION FOR DEVIATIONS
ITS 3.3.1 BASES, RTS INSTRUMENTATION

17. TSTF - 135 provides an insert for the Source Range Neutron Flux function in the Applicable Safety Analyses, LCO, and Applicability section of the Bases. This insert states, "are addressed in LCO 3.3.9, 'Boron Dilution Protection System (BDPS),' for MODES 3, 4, or 5 and LCO 3.9.3, 'Nuclear Instrumentation,' for MODE 6." The plant does not utilize BDPS instrumentation channels for boron dilution event protection, but relies on the isolation of unborated water sources that could dilute the RCS inventory. Therefore, the reference to LCO 3.3.9 is not appropriate and is deleted.

18. Not used.

19. The ISTS Bases for SR 3.3.1.7 includes a paragraph that describes the recording and reviewing of the "as-found" and "as-left" values of SR to ensure consistency with Reference 7. The reference cites WCAP-10271. ITS SR 3.3.1.7 does not include this Bases paragraph. This is acceptable based on CTS Amendment 228 (Unit 1) and 202 (Unit 2) which adopted WCAP-10271. In the license amendment request for this CTS change, the following condition for adopting WCAP-10271 was listed: A review of the 'as found' and 'as left' data over a twelve-month period should provide sufficient information to address the adequacy of the existing setpoints and allowable values." The response to the requirement stated, "The licensee evaluated the 'as found' and 'as left' plant data. In every case the drift with 95 percent confidence level was well below one percent per quarter. Permissive drifts were less than one percent over any 18 month period and the drifts of the control parameters were within acceptable limits of the plant control systems." There was no commitment to perform an on-going evaluation of "as-found" and "as-left" data because the instrumentation is stable. From this response provided by the licensee, the NRC concluded that the CTS change was acceptable. Therefore, the Bases paragraph requiring the recording and reviewing of 'as found' and 'as left' data is not required and is deleted. If the SR is not met, the ITS Actions will be followed.

20. The Bases of SR 3.3.1.2 are revised. TSTF-371, Rev. 1 revises SR 3.3.1.2 and adds a description of the power range decalibration issue to the Bases of SR 3.3.1.2. The revised Bases in TSTF-371, Rev. 1 includes the sentence, "An evaluation of extended operation at part power conditions would conclude that it is prudent to administratively adjust the setpoint of the Power Range Neutron Flux - High bistables to \leq [85]% RTP when: 1) the power range channel output is adjusted in the decreasing power direction due to a part power calorimetric below 85% RTP; or 2) for a post refueling startup." The North Anna ITS Bases do not include the phrase, "to \leq [85]% RTP." In response to the power range decalibration issue (Westinghouse Technical Bulletin ESBU-TB-92-14-R1), the Company calculated a variable adjustment to the Power Range Neutron Flux - High bistable setpoints based on the power level at which the adjustment was performed. Therefore, specifying a single value in the Bases would be incorrect.

MB1433
MB1427
PB, R15
RA I 3.3.1-39
RS, R15

R6

MB2074
R17

A.1

TABLE 4.3-1
REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

NORTH ANNA - UNIT 1

3/4 3-12
Page 11 of 20

Amendment No. 81-206, 221

Rev. 17

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	Corrad	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time TEST	Other
1	1. Manual Reactor Trip	N.A.	N.A.	3.3.1.14	A.11	1, 2 and *	N/A	L.20
2	2. Power Range, Neutron Flux							
2a	A. High Setpoint	3.3.1.1 (8)	3.3.1.2 (L.15, L.17, 3.3.1.2, L.9, L.16)	3.3.1.7 (A.28)	A.11	1, 2	3.3.1.16	RAI 3.3.1-32 R5
2b	B. Low Setpoint	3.3.1.1 (8)	3.3.1.11 (R.10)	3.3.1.8 (S.11)	A.11	1***, 2	3.3.1.16	
3a	3. Power Range, Neutron Flux, High Positive Rate	N.A.	3.3.1.11 (R.10)	3.3.1.7 (A.11)	A.11	1, 2	N/A	L.20
3b	4. Power Range, Neutron Flux, High Negative Rate	N.A.	3.3.1.11 (R.10)	3.3.1.7 (A.11)	A.11	1, 2	3.3.1.16	
4	5. Intermediate Range, Neutron Flux	3.3.1.1 (8)	3.3.1.11 (R.10)	3.3.1.8 (S/U (1), (12))	A.11	1***, 2 3*, 4*, 5*	N/A	L.20
5	6. Source Range, Neutron Flux	3.3.1.1 (8)	3.3.1.11 (R.10)	3.3.1.7 (S.11)	A.11	2, 3, 4, 5	3.3.1.16	RAI 3.3.1-35 R5
6	7. Overtemperature ΔT	3.3.1.1 (8)	3.3.1.12 (R.10)	3.3.1.7 (A.28)	A.11	1, 2	3.3.1.16	
7	8. Overpower ΔT	3.3.1.1 (8)	3.3.1.12 (R.10)	3.3.1.7 (A.11)	A.11	1, 2	N/A	L.20
8a	9. Pressurizer Pressure - Low	3.3.1.1 (8)	3.3.1.10 (R.10)	3.3.1.7 (A.11)	A.11	1, 2	3.3.1.16	RAI 3.3.1-39 R5
8b	10. Pressurizer Pressure - High	3.3.1.1 (8)	3.3.1.10 (R.10)	3.3.1.7 (A.11)	A.11	1, 2	3.3.1.16	
9	11. Pressurizer Water Level - High	3.3.1.1 (8)	3.3.1.10 (R.10)	3.3.1.7 (A.11)	A.11	1, 2	3.3.1.16	
10	12. Loss of Flow	3.3.1.1 (8)	3.3.1.10 (R.10)	3.3.1.7 (A.11)	A.11	1	3.3.1.16	

RAI 3.3.1-32

ITS 3.3.1

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

satisfactory. The time required to perform these SRs is approximately 2 hours per channel. Therefore, the Power and Intermediate Range channels take approximately 12 hours. This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. The Power Range Low Setpoint, Intermediate and Source Ranges through operating experience have shown to be reliable and usually satisfy the surveillance requirements. These instruments will continue to be tested at a frequency to ensure each channel's OPERABILITY requirements. The required testing ensures the channels proper operation and its safety functions are OPERABLE as required by their design requirements. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

RAI
3.3.1-31
R12

RAI
3.3.1-31
R5

RAI
3.3.1-31
R12

- L.7 *(Category 7 – Relaxation Of Surveillance Frequency)* CTS surveillance requirements for the Power Range Neutron Flux High Setpoint are listed in Table 4.3-1. This requires a CHANNEL CALIBRATION to be performed daily. The requirement is modified by Note (2). Unit 1 Note (2) states, "Heat balance only, above 15 % of RATED THERMAL POWER." Unit 2 Note (2) states, "Heat balance only, above 15 % of RATED THERMAL POWER. Adjust channel if absolute difference > 2 percent." ITS SR 3.3.1.2 is required for the Power Range Neutron Flux High Setpoint every 24 hours. The SR states, "Compare results of calorimetric heat balance calculation to power range channel output. Adjust power range output if calorimetric heat balance exceeds power range channel output by more than +2 % RTP." This changes the CTS by only requiring an adjustment of the Power Range channel if the calorimetric exceeds the power range channel output by more than +2% RTP.

MB2074
R17

This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. Westinghouse Technical Bulletin ESBU-TB-92-14-R1, "Decalibration Effects of Calorimetric Power Measurements on the NIS High Power Reactor Trip at Power Levels Less than 70% RTP," states that adjustment of NIS channels based on calorimetric results taken at partial power can create non-conservative trip setpoints for the Power Range channels. The elimination of the requirement to adjust the Power Range channels when the indicated power range reactor power is greater than the calculated calorimetric power ensures the High Power Reactor Trip remains conservative. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

- L.8 *(Category 1 – Relaxation of LCO Requirements)* CTS requirements for RTS interlocks (P-6, P-8, P-10, and P-13) provide specific numbers for the Allowable Values. The Allowable Values for the P-7 function come from the requirements of P-10 and P-13. ITS requirements for these functions are provided with appropriate \geq or \leq symbols to specifically state the limits for each RTS interlock value. This changes the CTS by allowing the values of the RTS interlocks to be set to a limit not currently allowed.

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

This change is acceptable because the LCO requirements continue to ensure that the process variables are maintained consistent with the safety analyses and licensing basis. The addition of the symbols provides for a conservative tolerance for the RTS interlock function in accordance with the safety analyses assumptions. This change is designated as less restrictive because less stringent LCO requirements are being applied in the ITS than were applied in the CTS.

- L.9 (Category 7 – Relaxation of Surveillance Frequency) CTS Table 4.3-1 lists the surveillance requirements for the Power Range Neutron Flux CHANNEL CALIBRATION as M⁽³⁾⁽⁶⁾. Note⁽³⁾ states, "Compare incore to excore axial offset above 15 % RATED THERMAL POWER (RTP). Adjust channel if absolute difference \geq 3 percent." ITS Table 3.3.1-1 specifies SR 3.3.1.3 for the Overtemperature ΔT function. SR 3.3.1.3 states, "Compare results of the incore detector measurements to Nuclear Instrumentation System (NIS) AFD. Adjust NIS channel if absolute difference \geq 3%." A Note modifies the SR which states, "Not required to be performed until 72 hours after THERMAL POWER is \geq 15 % RTP." This changes the CTS by specifically stating that 72 hours is allowed before requiring the completion of a comparison after THERMAL POWER \geq 15 % RTP.

The purpose of the ITS SR 3.3.1.3 Note is to state that the SR is only applicable above the 15 % RTP and 72 hours provides a reasonable period of time to perform the SR after exceeding the required power level. This SR is consistent with SRs 3.2.3.1 and 3.3.1.9 that provide for a surveillance of AFD and ΔI requirements with the same time allowance. This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. The allowance of 72 hours after exceeding 15 % RTP is a reasonable period of time to perform the flux mapping, and compare the result with the indicated AFD of the NIS channels. The incore to excore indication of ΔI below 15 % of RTP does not provide for accurate comparisons, therefore a limit of 15% is placed on the applicability of the SR. This change is designated as less restrictive because Surveillances can be performed less frequently under the ITS than under the CTS.

- L.10 (Category 7 – Relaxation Of Surveillance Frequency) CTS Table 4.3-1 list for the Power Range (Low Setpoint), Intermediate Range, and the Source Range channels S/U⁽¹⁾ requirements for a CHANNEL FUNCTIONAL TEST (CFT). This also requires the CFT be performed prior to a reactor start up if not completed within the previous 31 days (Note⁽¹⁾). The Source and Intermediate Ranges additionally require Q⁽¹²⁾ requirement. Note⁽¹²⁾ states, "Quarterly Surveillance in Modes 3*, 4*, and 5* shall also include verification that Permissive P-6 and P-10 are in their required state

RAI
3.3.1-32
RS

MB
2074
R17

MB2074
R17

MB433
MB427
RB, RS
RAI
3.3.1-39
RS, RS

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

not assumed by the safety analyses, but is an operational consideration. The P-13 interlock actuates to provide an input signal to the P-7 interlock. With power level increasing above 10 % RTP, the P-7 interlock initiates a permissive signal to the Reactor Trip System. This allows the functions to generate a trip signal for the specified conditions. This function is assumed to function by the safety analyses. P-6, P-8, and P-13 interlock functions for the directions indicated above, are not assumed to provide safety system protection signals in the safety analyses. This change is designated as less restrictive because less stringent LCO requirements are being applied in the ITS than were applied in the CTS.

- L.15 (*Category 7 – Relaxation of Surveillance Frequency*) CTS surveillance requirements for the Power Range Neutron Flux CHANNEL CALIBRATION are listed in Table 4.3-1 as D⁽²⁾. This requires the four Power Range channels to be compared to the heat balance of the RCS (calorimetric) on a daily basis. Note⁽²⁾ state that the heat balance is required to be performed above 15 % RTP. ITS SR 3.3.1.2 for the Power Range Neutron Flux must be performed every 24 hours. The requirement is modified by a Note, which states, “Not required to be performed until 12 hours after THERMAL POWER is \geq 15 % RTP.” This changes the CTS by allowing 12 hours to perform a CHANNEL CALIBRATION after THERMAL POWER of the Power Range channels exceeds 15 % RTP for the initial surveillance testing.

MB 2074
R17

This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. The allowance of 12 hours after exceeding 15 % RTP is a reasonable period of time during a plant start up. The transient nature of returning the plant to full power and performing the required testing requires the plant to be in a steady state condition. The operator monitors power level indications on a continuous basis and CHANNEL CHECKS must be performed on the Power Range channels on a 12-hour basis. The performance of the CHANNEL CHECK is sufficient compensatory measures to ensure the OPERABILITY for the Power Range channel instrumentation until the CHANNEL CALIBRATION is performed. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

- L.16 (*Category 7 – Relaxation of Surveillance Frequency*) CTS Table 4.3-1 lists a CHANNEL CALIBRATION requirement for the Power Range channels as M⁽³⁾. This requires CHANNEL CALIBRATION to be performed every 31 days. ITS SR 3.3.1.3 requires a comparison of the incore measurements to the excore indication every 31 effective full power days (EFPD). Other changes associated with this requirement are addressed in DOC L.9 and A.28. This changes the CTS by allowing CHANNEL CALIBRATION to be performed on an EFPD basis instead of calendar days.

RAI
3.3.1.34
R5

The purpose of the ITS SR Frequency expressed in EFPD is to relate the requirement to a meaningful time frame. This change is acceptable because the new Surveillance

**Responses to NRC Requests for Additional Information
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and
Application," and ITS 3.3, "Instrumentation"**

In Revision 13, the Company proposed a change to the Bases of SR 3.9.1.1 to clarify the boron concentration sampling requirements for the RCS, the refueling cavity, and the refueling canal. In verbal comments, the NRC stated that the change altered the intent of the Surveillance and a technical justification would be required to support the change. The Company withdraws the proposed change.

BASES

ACTIONS

A.3 (continued)

Once actions have been initiated, they must be continued until the boron concentration is restored. The restoration time depends on the amount of boron that must be injected to reach the required concentration.

SURVEILLANCE
REQUIREMENTS

SR 3.9.1.1

This SR ensures that the coolant boron concentration in the RCS, and connected portions of the refueling canal and the refueling cavity, is within the COLR limits. The boron concentration of the coolant in each required volume is determined periodically by chemical analysis. Prior to re-connecting portions of the refueling canal or the refueling cavity to the RCS, this SR must be met per SR 3.0.1. If any dilution activity has occurred while the cavity or canal were disconnected from the RCS, this SR ensures the correct boron concentration prior to communication with the RCS.

R13
R17

A minimum Frequency of once every 72 hours is a reasonable amount of time to verify the boron concentration of representative samples. The Frequency is based on operating experience, which has shown 72 hours to be adequate.

REFERENCES

1. UFSAR, Section 3.1.22.
-
-

BASES

ACTIONS

A.3 (continued)

Once actions have been initiated, they must be continued until the boron concentration is restored. The restoration time depends on the amount of boron that must be injected to reach the required concentration.

SURVEILLANCE
REQUIREMENTS

SR 3.9.1.1

This SR ensures that the coolant boron concentration in the RCS, the refueling canal, and the refueling cavity is within the COLR limits. The boron concentration of the coolant in each volume is determined periodically by chemical analysis.

and connected portions of

required

A minimum Frequency of once every 72 hours is a reasonable amount of time to verify the boron concentration of representative samples. The Frequency is based on operating experience, which has shown 72 hours to be adequate.

Insert
TSTA-272/RB

REFERENCES

1. 10 CFR 50, Appendix A, GDC 26.
2. FSAR, Chapter [15].

UFSAR section 3.1.22.

①
②

**JUSTIFICATION FOR DEVIATIONS
ITS 3.9.1 BASES, BORON CONCENTRATION**

1. North Anna Units 1 and 2 were designed and constructed on the basis of the proposed General Design Criteria, published in 1966. Since February 20, 1971, when the General Design Criteria for Nuclear Power Plants, Appendix A to 10 CFR Part 50, were published, the Company attempted to comply with the intent of the newer criteria to the extent practical, recognizing previous design commitments. The NRC's Safety Evaluation Report for North Anna Units 1 and 2 reviewed the plant against 10 CFR Part 50, Appendix A and concluded that the facility design conforms to the intent of the newer criteria. The North Anna UFSAR contains discussions comparing the design of the plant to the 10 CFR 50, Appendix A, General Design Criteria. Bases references to the 10 CFR 50, Appendix A criteria have been replaced with references to the appropriate section of the UFSAR.
2. The Bases are revised to reflect the North Anna boron dilution analysis. The North Anna analysis is based on locking out the primary grade water sources. As a result, there is no "limiting" boron dilution analysis. A detailed discussion of this event does not appear in the Bases for Specification 3.1.1. Therefore, these sentences are deleted.
3. The criteria of the NRC Final Policy Statement on Technical Specifications Improvements have been included in 10 CFR 50.36(c)(2)(ii). Therefore, references in the ISTS Bases to the NRC Final Policy Statement are revised in the ITS Bases to reference 10 CFR 50.36.
4. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.
5. Editorial changes are made to the Bases to be consistent with the ITS or to make the sentences grammatically correct.

R17

Attachment

**Proposed Improved Technical Specifications
Change Not Associated with BSIs or RAIs**

**Virginia Electric and Power Company
(Dominion)**

North Anna Power Station Units 1 and 2

Changes to ITS Submittal Not Associated With RAIs
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and Application," and ITS 3.3, "Instrumentation"

1. TSTF-359, Revision 5, was incorporated into the North Anna ITS in Revision 2. TSTF-359, Revision 6, was provided to the NRC on February 22, 2002. The North Anna ITS is revised to incorporate TSTF-359, Revision 6. TSTF-359 eliminates specific LCO 3.0.4 exceptions and allows the use of a risk evaluation to enter the Applicability with the LCO not met for most systems. Revision 6 modified the Bases based on NRC and industry comments and provided an exception to enter into the Applicability with the LCO not met for LCO 3.4.16, RCS Specific Activity. In addition, ITS 3.3.1 DOC A.12, ITS 3.3.2 DOC A.7, ITS 3.6.2 DOC A.3, and ITS 3.6.3 DOC A.6 are revised to accurately quote LCO 3.0.4 as modified by TSTF-359, Revision 6.

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2 and LCO 3.0.7.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 3 within 7 hours;
- b. MODE 4 within 13 hours; and
- c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time,

(continued)

R2
R17

3.0 LCO APPLICABILITY

LCO 3.0.4
(continued)

- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or
- c. When a specific value or parameter allowance has been approved by the NRC.

R2
R17

This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

R2

LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3, and 4.

LCO 3.0.5

Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

LCO 3.0.6

When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, an evaluation shall be performed in accordance with Specification 5.5.14, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

When a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

3.0 SR APPLICABILITY

SR 3.0.3
(continued) When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency. When an LCO is not met, entry into a MODE or other specific condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time,
- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or
- c. When a specific value or parameter allowance has been approved by the NRC.

| R2
| R2
| R17
| R17

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3 and 4.

BASES

LCO 3.0.3
(continued)

can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.16 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.16 of "Suspend movement of irradiated fuel assemblies in the fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It precludes placing the unit in a MODE or other specified condition stated in that Applicability (e.g., Applicability desired to be entered) when the following exist:

- a. Unit conditions are such that the requirements of the LCO would not be met in the Applicability desired to be entered; and
- b. Continued noncompliance with the LCO requirements, if the Applicability were entered, would result in the unit being required to exit the Applicability desired to be entered to comply with the Required Actions.

Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made in accordance with the provisions of the Required Actions.

When an LCO is not met, LCO 3.0.4 also allows entering MODES or other specified conditions in the Applicability following assessment of the risk impact and determination that the impact can be managed. The risk evaluation may use quantitative, qualitative, or blended approaches, and the risk evaluation will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk evaluations will be conducted using the procedures and

(continued)

BASES

LCO 3.0.4
(continued)

guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants."

R17

The results of the risk evaluation shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. Consideration will be given to the probability of completing restoration such that the requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

A risk assessment and establishment of risk management actions, as appropriate, are required for determination of acceptable risk for entering MODES or other specified conditions in the Applicability when an LCO is not met. The elements of the risk assessment and risk management actions are included in Regulatory Guide 1.182 which addresses general guidance for conduct of the risk evaluation, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable.

A quantitative, qualitative, or blended risk evaluation must be performed to assess the risk impact of entering the MODE or other specified condition in the Applicability, based on the specific plant configuration at that time and the risk impacts must be managed in accordance with the assessment results.

From generic evaluations, systems/components can be identified which are equally or more important to risk in MODE 1 than in the transition MODES. The Technical Specifications allow continued operation with this equipment unavailable during MODE 1 operation for the duration of the Completion Time. Since this is allowable, and since the risk impact bounds the risk of transitioning up in MODE and entering the Conditions and Required Actions, the use of the LCO 3.0.4 allowance for these systems should be generally acceptable, as long as the risk is assessed and managed as
(continued)

BASES

LCO 3.0.4
(continued)

stated above. However, there is a small subset of systems/components that have been generically determined to be more important to risk in MODES 2-5 and do not have the LCO 3.0.4 allowance. These system/components are listed below.

The Applicability should be reviewed with respect to the actual plant configuration at that time. Each individual application of LCO 3.0.4.b, whether due to one or more than one LCO 3.0.4.b allowance at the same time, is required to be evaluated under the auspices of 10 CFR 50.65(a)(4) and consideration of risk management actions discussed in Regulatory Guide 1.182. For those cases where the risk of the MODE change may be greater (i.e., the systems and components listed below), prior NRC review and approval of a specific LCO 3.0.4 allowance is required.

The LCO 3.0.4.b allowance typically only applies to systems and components. The values and parameters of the Technical Specifications (e.g., Containment Air Temperature, Containment Pressure, Moderator Temperature Coefficient, etc.) are typically not addressed by this LCO 3.0.4.b allowance. These values and parameters are addressed by the LCO 3.0.4.c allowance.

A list of the LCO 3.0.4.c specific value and parameter allowances approved by the NRC is provided below.

LCO 3.4.16, RCS Specific Activity

In order to support the conduct of the appropriate assessments, each Owners Group has performed an evaluation to identify plant systems or components which are more important to risk in the transition MODES than in MODE 1. To apply the LCO 3.0.4 allowance to these systems and components, prior NRC review and approval is required. These systems are listed in the following table.

(continued)

BASES

LCO 3.0.4
(continued)

<u>System*</u>	<u>MODE or Other Specified Condition in the Applicability</u>
RCS Loops (RHR)	5
LTOP System	4, 5
ECCS Shutdown (ECCS High Head Subsystem)	4
AFW System	1
AC Sources (Diesel Generators)	1, 2, 3, 4, 5, 6

R17

* Including systems supporting the OPERABILITY of the listed systems.

NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," states that the rigor of the risk analysis should be commensurate with the risk impact of the proposed configuration. For unavailable plant systems or components listed on the above table, a plant MODE change has been determined, through generic evaluation, to result in a potential risk increase. Therefore, prior NRC review and approval is required to apply the LCO 3.0.4 allowance to these systems and components.

For unavailable plant systems or components not appearing in the above table, proposed plant MODE changes will generally not involve a risk increase greater than the system or component being unavailable in MODE 1. The risk assessment performed to support use of LCO 3.0.4.b for systems or components not appearing on the above table must meet all considerations of NUMARC 93-01, but need not be documented.

LCO 3.0.4.b may be used with single, or multiple systems or components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems or components.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

(continued)

BASES

SR 3.0.3
(continued)

importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

R2

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or component to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

A provision is included to allow entry into a MODE or other specified condition in the Applicability:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time,

(continued)

R2

R17

BASES

SR 3.0.4
(continued)

- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or
- c. When a specific value or parameter allowance has been approved by the NRC.

R2

R17

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed, per SR 3.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes.

The provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown.

The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO Applicability, would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note as not

(continued)

NOTE:

The following 6 pages revise inserts to the ISTS NUREG markup. The ISTS NUREG markup pages are not affected.

SECTION 3.0, LCO AND SR APPLICABILITY

INSERT

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, | R17
- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or | R17
- c. When a specific value or parameter allowance has been approved by the NRC.

SECTION 3.0, LCO AND SR APPLICABILITY

INSERT

When an LCO is not met, entry into a MODE or other specific condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, R17
- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or R17
- c. When a specific value or parameter allowance has been approved by the NRC.

SECTION 3.0, LCO AND SR APPLICABILITY

INSERT

When an LCO is not met, LCO 3.0.4 also allows entering MODES or other specified conditions in the Applicability following assessment of the risk impact and determination that the impact can be managed. The risk evaluation may use quantitative, qualitative, or blended approaches, and the risk evaluation will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk evaluations will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants."

R17

The results of the risk evaluation shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. Consideration will be given to the probability of completing restoration such that the requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

A risk assessment and establishment of risk management actions, as appropriate, are required for determination of acceptable risk for entering MODES or other specified conditions in the Applicability when an LCO is not met. The elements of the risk assessment and risk management actions are included in Regulatory Guide 1.182 which addresses general guidance for conduct of the risk evaluation, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable.

R17

R17

R17

A quantitative, qualitative, or blended risk evaluation must be performed to assess the risk impact of entering the MODE or other specified condition in the Applicability, based on the specific plant configuration at that time and the risk impacts must be managed in accordance with the assessment results.

R17

From generic evaluations, systems/components can be identified which are equally or more important to risk in MODE 1 than in the transition MODES. The Technical Specifications allow continued operation with this equipment unavailable during MODE 1 operation for the duration of the Completion Time. Since this is allowable, and since the risk impact bounds the risk of transitioning up in MODE and entering the Conditions and Required Actions, the use of the LCO 3.0.4 allowance for these systems should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems/components that have been generically determined to be more important to risk in MODES 2 - 5 and do not have the LCO 3.0.4 allowance. These system/components are listed in each of the generic Owners Groups Tables.

R17

R17

below

4

SECTION 3.0, LCO AND SR APPLICABILITY

The Applicability should be reviewed with respect to the actual plant configuration at that time. Each individual application of LCO 3.0.4.b, whether due to one or more than one LCO 3.0.4.b allowance at the same time, is required to be evaluated under the auspices of 10 CFR 50.65(a)(4) and consideration of risk management actions discussed in Regulatory Guide 1.182. For those cases where the risk of the MODE change may be greater (i.e., the systems and components listed on the generic Owners Group Table), prior NRC review and approval ⁽⁴⁾ of a specific LCO 3.0.4 allowance is required. Use below R17

The LCO 3.0.4.b allowance typically only applies to systems and components. The values and parameters of the Technical Specifications (e.g., Containment Air Temperature, Containment Pressure, MCPR, Moderator Temperature Coefficient, etc.) are typically not addressed by this LCO 3.0.4.b allowance. These values and parameters are addressed by the LCO 3.0.4.c allowance. (4) R17

A list of the LCO 3.0.4.c specific value and parameter allowances approved by the NRC is provided below.

LCO 3.4.16, RCS Specific Activity

In order to support the conduct of the appropriate assessments, each Owners Group has performed an evaluation to identify plant systems or components which are more important to risk in the transition MODES than in MODE 1. To apply the LCO 3.0.4 allowance to these systems and components, prior NRC review and approval is required. These systems are listed in the following table. R17

<u>System*</u>	<u>MODE or Other Specified Condition in the Applicability</u>
RCS Loops (RHR)	5
LTOP System	4, 5
ECCS Shutdown (ECCS High Head Subsystem)	4
AFW System	1
AC Sources (Diesel Generators)	1, 2, 3, 4, 5, 6

R17

* Including systems supporting the OPERABILITY of the listed systems. R17

NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," states that the rigor of the risk analysis should be commensurate with the risk impact of the proposed configuration. For unavailable plant systems or components listed on the above table, a plant MODE change has been determined, through generic R17

SECTION 3.0, LCO AND SR APPLICABILITY

evaluation, to result in a potential risk increase. Therefore, prior NRC review and approval is required to apply the LCO 3.0.4 allowance to these systems and components.

For unavailable plant systems or components not appearing in the above table, proposed plant MODE changes will generally not involve a risk increase greater than the system or component being unavailable in MODE 1. The risk assessment performed to support use of LCO 3.0.4.b for systems or components not appearing on the above table must meet all considerations of NUMARC 93-01, but need not be documented. R17

LCO 3.0.4.b may be used with single, or multiple systems or components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems or components.

SECTION 3.0, LCO AND SR APPLICABILITY

INSERT

A provision is included to allow entry into a MODE or other specified condition in the Applicability:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, | R17
- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or | R17
- c. When a specific value or parameter allowance has been approved by the NRC.

JUSTIFICATION FOR DEVIATIONS
SECTION 3.0 BASES, LCO AND SR APPLICABILITY

1. The brackets have been removed and the proper plant specific information/value has been provided.
2. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.
3. The Bases are changed to reflect a change to the Specifications.
4. The generic discussions added to the ITS 3.0 Bases by TSTF-359 have been revised to be applicable to the plant-specific Technical Specifications. References to generic Owners Groups Tables and to parameters which do not appear in the North Anna ITS are eliminated.

R17

NOTE:

The following 2 pages revise inserts to the Unit 1 and Unit 2 CTS markup. The Unit 1 and Unit 2 CTS markup pages are not affected.

SECTION 3.0, LCO AND SR APPLICABILITY

INSERT 4

Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits. Surveillances may be performed by means of any series of sequential, overlapping, or total steps.

INSERT 5

When an LCO is not met, entry into a MODE or other specific condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, R17
- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or R17
- c. When a specific value or parameter allowance has been approved by the NRC.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3 and 4.

SECTION 3.0, LCO AND SR APPLICABILITY

INSERT 4

Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits. Surveillances may be performed by means of any series of sequential, overlapping, or total steps.

INSERT 5

When an LCO is not met, entry into a MODE or other specific condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, R17
- b. After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or R17
- c. When a specific value or parameter allowance has been approved by the NRC.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3 and 4.

DISCUSSION OF CHANGES
SECTION 3.0, LCO AND SR APPLICABILITY

editorial conventions used in the ITS without resulting in technical changes to the specifications.

- A.6 CTS 3.0.3 states, "Where corrective measures are completed that permit operation under the ACTION requirement, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation." ITS LCO 3.0.3 states this as, "Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required."

This change is acceptable because the changes to CTS 3.0.3 are editorial. Both the CTS and ITS state that LCO 3.0.3 can be exited if the LCO which lead to the entry into LCO 3.0.3 is met, or if one of the ACTIONS of that LCO is applicable. The CTS requirement also specifies that the time to complete the ACTIONS in the LCO is based on the initial failure to meet the LCO. Reentering the LCO after exiting LCO 3.0.3 does not reset the ACTION statement time requirements. This information is not explicitly stated in ITS LCO 3.0.3 but is true under the multiple condition entry concept of the ITS. This change is designated as administrative because there is no change in the intent or application of the CTS 3.0.3 requirements.

- A.7 Unit 1 CTS 3.0.4 states, "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements unless otherwise excepted. This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION statements." The Unit 2 CTS 3.0.4 is identical, except that the phrase, "unless otherwise excepted" is eliminated from the first sentence and a sentence is added stating, "Exceptions to these requirements are stated in individual specifications." ITS 3.0.4 states, "When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made: a) When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, b) After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or c) When a specific value or parameter allowance has been approved by the NRC. This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit." The addition of the a) and b) conditions is described in Discussion of Change (DOC) L.1. The following changes are made to CTS 3.0.4:

- Unit 1 CTS 3.0.4 states, "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements unless otherwise excepted." Unit 2 CTS 3.0.4 is the same, except as described above. ITS LCO 3.0.4 does not contain a

DISCUSSION OF CHANGES
SECTION 3.0, LCO AND SR APPLICABILITY

discussion of exceptions, but LCO 3.0.4.c states that specific value or parameter allowances, as approved by the NRC, may be used. The list of value or parameter allowances is in the Bases and lists LCO 3.4.16, RCS Specific Activity. This change is acceptable because the provisions in ITS LCO 3.0.4 eliminate the need for specific exceptions in individual specifications. The specific exceptions are eliminated from the specifications and discussed in specific DOCs in those specifications. Elimination of reference to these exceptions is acceptable because it does not technically change the specifications.

R17

This change is designated as administrative because the change is needed to reflect technical changes made in other specifications. The technical aspects of those changes are discussed in other DOCs.

R2

- Unit 1 and Unit 2 CTS 3.0.4 states, "This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION statements." ITS LCO 3.0.4 states in part, "This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS." This change is acceptable because these statements are equivalent. Both are stating that LCO 3.0.4 shall not prevent a unit shutdown required by the Technical Specifications. The ITS wording recognizes that there are conditions in the Applicability that are not MODES, such as "During Core Alterations."

This change is designated as administrative as there is no change in the intent of CTS 3.0.4 and no additional flexibility is granted.

- A.8 ITS LCO 3.0.7 is added to the CTS. LCO 3.0.7 states, "Test Exception LCOs [3.1.8] and 3.4.19 allow specified Technical Specification requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Test Exception LCOs is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications."

This change is acceptable because the current Technical Specifications contain test exception specifications which allow certain LCOs to not be met for the purpose of special tests and operations. However, the CTS does not contain the equivalent of LCO 3.0.7. As a result, there could be confusion regarding which LCOs are applicable during special tests and LCO 3.0.7 was crafted to avoid that possible confusion. LCO 3.0.7 is consistent with the use and application of current test exception Specifications and does not provide any new restriction or allowance. This change is designated as administrative because it does not technically change the specifications.

DISCUSSION OF CHANGES
SECTION 3.0, LCO AND SR APPLICABILITY

for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met. For Frequencies specified as 'once,' the above interval extension does not apply. If a Completion Time requires periodic performance on a 'once per . . . ' basis, the above Frequency extension applies to each performance after the initial performance. Exceptions to this Specification are stated in the individual Specifications." This changes the CTS by adding, "For Frequencies specified as 'once,' the above interval extension does not apply." The remaining changes to CTS 4.0.2 are discussed in DOC A.10 and DOC L.5.

The purpose of the 1.25 extension allowance to Surveillance Frequencies is to allow for flexibility in scheduling tests. This change is acceptable because Frequencies specified as "once" are typically condition-based Surveillances in which the first performance demonstrates the acceptability of the current condition. Such demonstrations should be accomplished within the specified Frequency without extension in order to avoid operation in unacceptable conditions. This change is designated as more restrictive because an allowance to extend Frequencies by 1.25 is eliminated from some Surveillances.

RELOCATED SPECIFICATIONS

None

REMOVED DETAIL CHANGES

None

LESS RESTRICTIVE CHANGES

- L.1 CTS 3.0.4 does not allow entry into a MODE or other specified condition in the Applicability when an LCO is not met and while relying on ACTIONS without a specific exception. ITS LCO 3.0.4 contains the same restriction, but eliminates exceptions in specific LCOs and includes an allowance to enter a MODE or condition specified in the Applicability "a) When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, b) After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or c) When a specific value or parameter allowance has been approved by the NRC." CTS 4.0.4 states that entry into a MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise stated. ITS SR 3.0.4 states that entry into a MODE or other specified condition in the Applicability of an

R17

R2

DISCUSSION OF CHANGES
SECTION 3.0, LCO AND SR APPLICABILITY

LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency. When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made: "a) When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, b) After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or c) When a specific value or parameter allowance has been approved by the NRC." This changes the CTS by allowing additional circumstances under which a MODE or other specified condition in the Applicability may be entered when the LCO is not met. ITS LCO 3.0.4.c is addressed in DOC A.7.

R17

R17

The allowance to enter a MODE or other specified condition in the Applicability with the LCO not met when the ACTIONS allow unlimited operation is acceptable because ACTIONS which allow unlimited operation provide appropriate compensatory measures which protect the safety functions affected by the LCO not being met. In such a condition, allowing the unit to enter the MODES in which the LCO is applicable will have no detrimental effect on safety. For example, the Containment Isolation Valve ACTIONS for an inoperable valve allow unlimited operation provided that the valve is in its required position assumed in the safety analysis. Therefore, the safety function being protected by the LCO (in this example, containment isolation) continues to be protected. The allowance to enter a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions is appropriate because these activities, when performed as described in the LCO 3.0.4 Bases, ensure that the change in MODE or other specified condition in the Applicability has been properly evaluated to ensure that the risk to the plant is acceptable. This change is designated as less restrictive because it will allow changes in MODE or other specified conditions in the Applicability under circumstances that would be prohibited in the CTS.

R2

- L.2 ITS LCO 3.0.5 is added to the CTS. ITS LCO 3.0.5 states, "Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY."

The purpose of ITS LCO 3.0.5 is to provide an exception to ITS LCO 3.0.2. ITS LCO 3.0.2 states that when an LCO is not met the Required Actions must be followed. ITS LCO 3.0.5 allows the performance of Surveillance Requirements to demonstrate the OPERABILITY of the equipment being returned to service or of other equipment that otherwise could not be performed without exiting the Applicability of the affected LCO. This LCO contains an allowance that, although

SECTION 3.0, LCO AND SR APPLICABILITY

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS

R2

10 CFR 50.92 EVALUATION FOR LESS RESTRICTIVE CHANGES

SECTION 3.0, LCO AND SR APPLICABILITY, CHANGE L.1

The North Anna Nuclear Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

CTS 3.0.4 does not allow entry into a MODE or other specified condition in the Applicability when an LCO is not met and while relying on ACTIONS without a specific exception. ITS LCO 3.0.4 contains the same restriction, but eliminates exceptions in specific LCOs and includes an allowance to enter a MODE or condition specified in the Applicability "a) When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, b) After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or c) When a specific value or parameter allowance has been approved by the NRC." CTS 4.0.4 states that entry into a MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise stated. ITS SR 3.0.4 states that entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency. When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made: "a) When the associated ACTIONS to be entered permit continued operation in the MODE or other specific condition in the Applicability for an unlimited period of time, b) After performance of a risk evaluation, consideration of the results, determination of the acceptability of the MODE change, and establishment of risk management actions, if appropriate, or c) When a specific value or parameter allowance has been approved by the NRC." This changes the CTS by allowing additional circumstances under which a MODE or other specified condition in the Applicability may be entered when the LCO is not met. ITS LCO 3.0.4.c is addressed in DOC A.7.

R17

R17

The allowance to enter a MODE or other specified condition in the Applicability with the LCO not met when the ACTIONS allow unlimited operation is acceptable because ACTIONS which allow unlimited operation provide appropriate

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

trip setpoints within their necessary range and accuracy. The TADOT is defined in a similar manner for the trip actuation device. The TADOT requirements provide for a digital or bistable channel testing requirements of the CTS CFT requirements. The ALT verifies the OPERABILITY of the logic circuits and its required outputs. This type of testing is required in the CTS requirements by the monthly CFT for the Automatic Trip Logic. This change is designated as administrative because it does not result in technical changes to the CTS surveillance requirements.

RAI
3.3.1-10
RS

- A.12 CTS 3.3.1.1 Actions denoted with a # in Table 3.3-1 state that the provisions of Specification 3.0.4 are not applicable. The ITS does not contain this exception, but provides the same allowance in the requirements of LCO 3.0.4. This change modifies the CTS by eliminating the specific exception to Specification 3.0.4 and utilizing a generic exception described in LCO 3.0.4.

R17

This change is acceptable because ITS LCO 3.0.4 states when an LCO is not met, entry into the applicable MODE may be made when the associated Actions permit continued operation for an unlimited period of time. The Actions modified by note # allow continued operation for an unlimited period of time. Therefore, eliminating the specific exceptions to CTS 3.0.4 is appropriate because the allowance is addressed in ITS LCO 3.0.4. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.13 Not used.

RAI
3.3.1-11
RS

- A.14 CTS surveillance requirement in Table 4.3-1 for the SI input from ESF is stated as M⁽⁴⁾. Note ⁽⁴⁾ states the following "Manual ESF functional input check every 18 months." The monthly requirement is therefore only required to check the input from ESF on an 18 monthly frequency. ITS 3.3.1 for function 17, SI input from ESF, requires SR 3.3.1.14 to be performed. This requirement performs a TADOT every 18 months. A Note modifies the requirement that specifies that verification of setpoint is not required. This change maintains the technical requirements of the CTS in ITS format.

This change is acceptable because the current requirement is only performed every 18 months to verify the SI input. No setpoint verification is required with the input from ESF and therefore, the Note modifying the SR does not change the technical intent from the CTS requirement. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.15 CTS 3.3.1.1 requirements for Functional Unit 6.C, Source Range Neutron Flux Shutdown, are stated in CTS Table 3.3-1. The total number of Source Range channels is listed as two, and the minimum channels OPERABLE is listed as one. Note 5 does not require any action unless no channels are OPERABLE. This requirement is applicable in MODES 3, 4, and 5 with the RTBs open. ITS 3.3.1 requirement for the Source Range Neutron Flux, Function 5, is stated in ITS Table 3.3.1-1, and lists the number of required channels as one. The Table lists the applicability or other

RAI
3.3.1-12
RS

R17

DISCUSSION OF CHANGES
ITS 3.3.2, ESFAS

actuation logic and actuation relays, and the safety injection signals provide the Containment Isolation Phase A initiation signal. This rewords the requirement and provides a clarification for the CTS.

This change is acceptable because the CTS requirements are maintained in ITS format. The Containment Phase A Isolation is initiated by the automatic actuation logic and actuation relays and the safety injection signals. The presentation of the requirements in ITS format does not modify the technical requirement of the CTS. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

- A.7 CTS requirements for LCO 3.3.2.1 in Table 3.3-3 associated with Functions require various Actions marked with * to be entered when a channel becomes inoperable for the functions. The notation * for the Action states, "The provisions of Specification 3.0.4 are not applicable." This allowance is not needed to be specifically stated for these functions in the ITS format and is eliminated.

This change is acceptable because ITS LCO 3.0.4 states that when an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except when the associated Actions to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. The Required Actions of ITS LCO 3.3.2 for the ESFAS Functions conform to this requirement, and therefore the allowance is provided in the ITS without requiring a specific exception. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

R17

- A.8 CTS Table 4.3-2 lists in the last column the MODES in which the associated Surveillance Requirements must be performed. CTS Tables 3.3-3 and 4.3-2 are combined to form ITS Table 3.3.2-1. With the combining of these Tables, the 'MODES in which surveillance required' column of 4.3-2 is redundant to the requirements listed for the functions in Table 3.3-3 'Applicable MODES' column and is eliminated. ITS Table 3.3.2-1 labels this column as, 'Applicable MODES or other specified conditions.'

This change is acceptable because the technical requirements for each listed function is maintained with the conversion of the CTS to the ITS requirements. Any changes to the CTS Applicable MODES would apply to the Surveillance Requirements, and would be discussed in a separate discussion of change. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

- A.9 CTS Surveillance Requirement 4.3.2.1.2 requires the ENGINEERED SAFETY FEATURES RESPONSE TIME test on each ESFAS function be performed at least once per 18 months. The requirement states, "Each test shall include at least one

DISCUSSION OF CHANGES
ITS 3.6.2, CONTAINMENT AIR LOCKS

ADMINISTRATIVE CHANGES

- A.1 In the conversion of the North Anna Current Technical Specifications (CTS) to the plant specific Improved Technical Specifications (ITS), certain changes (wording preferences, editorial changes, reformatting, revised numbering, etc.) are made to obtain consistency with NUREG-1431, Rev. 1, "Standard Technical Specifications-Westinghouse Plants" (ISTS).

These changes are designated as administrative changes because they do not result in technical changes to the CTS.

- A.2 CTS 3.6.1.3 Action a.1 includes an Action requirement that states, "...and either restore the inoperable air lock to OPERABLE status..." ITS 3.6.2 Condition A does not include such an Action Requirement. This changes CTS by not explicitly stating that correcting the cause of Condition entry allows the Condition to be exited.

The purpose of the statement in CTS 3.6.1.3 Action a.1 is to make it clear that one option for exiting a Condition is to meet the LCO. This change is acceptable because the concept is stated in ITS 3.0.2. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.3 CTS 3.6.1.3.a.4 states, "The provisions of Specification 3.0.4 are not applicable." CTS 3.0.4 states, "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provision contained in the ACTION statements unless otherwise excepted." ITS 3.6.2 does not contain the exception to ITS 3.0.4. ITS 3.0.4 states that when an LCO is not met, entry into a MODE or other specified condition in the Applicability may be made when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This changes CTS by deleting a reference to a requirement which is changed in ITS in such a way that the reference is no longer required. R17

The purpose of CTS 3.6.1.3.a.4 is to provide an exception to the CTS 3.0.4. This change is considered acceptable because ITS 3.0.4 is structured such that these exceptions are not required. ITS 3.6.2 Actions allow continued operation for an unlimited period of time, which together with ITS 3.0.4 result in the same technical requirements as the CTS Actions. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.4 CTS 3.6.1.3 Action a.2 includes an Action requirement that states, "Operation may then continue until performance of the next required overall air lock leakage test provided that..." but does not include a requirement to perform such a test in response to entering the Condition. ITS 3.6.2 does not include such a statement. This changes CTS by deleting an exclusion for an Action that is not required.

DISCUSSION OF CHANGES
ITS 3.6.3, CONTAINMENT ISOLATION VALVES

specified actions. ITS 3.6.3 does not state the requirement to restore an inoperable isolation valve to OPERABLE status, but includes other Actions to take within 4 hours. ITS LCO 3.0.2 states, "If the LCO is met or no longer applicable prior to the expiration of the specified Completion time(s), completion of the Required Actions(s) is not required unless otherwise stated." This changes CTS by including the requirement as part of LCO 3.0.2, rather than explicitly stating the allowance.

This change is acceptable because it retains an existing allowance in ITS format with ITS usage rules. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.5 CTS 3.6.3.1 and CTS 3.6.5.1 do not include any Condition and Required Actions for one or more penetration flow paths with two containment isolation valves inoperable. CTS 3.0.3 would be entered for this Condition. ITS 3.6.3 Condition B states, "One or more penetration flow paths with two containment isolation valves inoperable." ITS Required Action B.1 states, "Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange," within 1 hour. ITS 3.6.3 Condition E requires the unit be placed in MODE 3 in 6 hours, and MODE 5 in 36 hours if the Required Action and associated Completion Time is not met. This changes CTS by stating the Actions to be taken for two containment isolation valves inoperable, rather than relying on CTS 3.0.3, which contains the same Completion Times for placing the unit outside its MODE of Applicability.

RA1
3.6.3.2
R14

This change is acceptable because it places CTS 3.0.3 requirements in ITS format. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.6 CTS 3.6.3.1 Action states, "The provisions of Specification 3.0.4 do not apply." CTS 3.0.4 states, "Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provision contained in the ACTION statements unless otherwise excepted." ITS 3.6.2 does not contain the exception to ITS 3.0.4. ITS 3.0.4 states that when an LCO is not met, entry into a MODE or other specified condition in the Applicability may be made when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This changes CTS by incorporating an allowance into ITS LCO 3.0.4.

R17

This change is considered acceptable because LCO 3.0.4 is changed in ITS such that the NOTE is not required to retain the same CTS requirement. ITS 3.6.2 Actions allow continued operation for an unlimited period of time, which together with ITS 3.0.4 result in the same technical requirements as the CTS. This change is designated as administrative because it does not result in technical changes to the CTS.

**Changes to ITS Submittal Not Associated With RAIs
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and
Application," and ITS 3.3, "Instrumentation"**

2. The Bases of Specification 3.3.5, "LOP EDG Start Instrumentation," are revised to refer to a plant-specific risk evaluation consistent with WCAP-14333-P-A in a manner consistent with the Bases of Specifications 3.3.1 and 3.3.2. There is no change to the intent of the Bases. This change did not affect the ITS, CTS markup, or DOCs.

BASES

LCO
(continued) of offsite power the EDG powers the motor driven auxiliary feedwater pumps. Failure of these pumps to start would leave only one turbine driven pump, as well as an increased potential for a loss of decay heat removal through the secondary system.

APPLICABILITY The LOP EDG Start Instrumentation Functions are required in MODES 1, 2, 3, and 4 because ESF Functions are designed to provide protection in these MODES. Actuation in MODE 5 or 6 is required whenever the required EDG must be OPERABLE so that it can perform its function on a LOP or degraded power to the vital bus.

RAI
3.8.2-5
R16

ACTIONS In the event a channel's trip setpoint is found nonconservative with respect to the Allowable Value, or the channel is found inoperable, then the function that channel provides must be declared inoperable and the LCO Condition entered for the particular protection function affected.

Because the required channels are specified on a per bus basis, the Condition may be entered separately for each bus as appropriate.

A Note has been added in the ACTIONS to clarify the application of Completion Time rules. The Conditions of this Specification may be entered independently for each Function listed in the LCO and for each emergency bus. The Completion Time(s) of the inoperable channel(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function for the associated emergency bus.

A.1

Condition A applies to the LOP EDG start Function with one loss of voltage or degraded voltage channel per bus inoperable.

If one channel is inoperable, Required Action A.1 requires that channel to be placed in trip within 72 hours. A plant-specific risk assessment, consistent with Reference 4, was performed to justify the 72 hour Completion Time. With a channel in trip, the LOP EDG start instrumentation channels are configured to provide a one-out-of-two logic to initiate a trip of the incoming offsite power.

R17

(continued)

BASES

ACTIONS

A.1 (continued)

A Note is added to allow bypassing an inoperable channel for up to 12 hours for surveillance testing of other channels. A plant-specific risk assessment, consistent with Reference 4, was performed to justify the 12 hour time limit. This allowance is made where bypassing the channel does not cause an actuation and where normally, excluding required testing, two other channels are monitoring that parameter.

R17

The specified Completion Time and time allowed for bypassing one channel are reasonable considering the Function remains fully OPERABLE on every bus and the low probability of an event occurring during these intervals.

B.1

Condition B applies when more than one loss of voltage or more than one degraded voltage channel on an emergency bus is inoperable.

Required Action B.1 requires restoring all but one channel to OPERABLE status. The 1 hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start occurring during this interval.

C.1

Condition C applies to each of the LOP EDG start Functions when the Required Action and associated Completion Time for Condition A or B are not met.

In these circumstances the Conditions specified in LCO 3.8.1, "AC Sources-Operating," or LCO 3.8.2, "AC Sources-Shutdown," for the EDG made inoperable by failure of the LOP EDG start instrumentation are required to be entered immediately. The actions of those LCOs provide for adequate compensatory actions to assure unit safety.

RAI
3.8.2-5
R16

RAI
3.8.2-5
R16

SURVEILLANCE
REQUIREMENTS

SR 3.3.5.1

SR 3.3.5.1 is the performance of a TADOT for channels required by LCO 3.3.5.a and LCO 3.3.5.b. 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

RAI
3.3.5-01
R6

(continued)

BASES

REFERENCES

1. UFSAR, Section 8.3.
2. Technical Requirements Manual.
3. RTS/ESFAS Setpoint Methodology Study (Technical Report EE-0116).
4. WCAP 14333-P-A, Rev. 1, October 1998.
5. UFSAR, Chapter 15.

R16
RAI
3.3.5-06
R6
R17
RAI
3.3.5-05
R6

BASES

ACTIONS
(continued)

this Specification may be entered independently for each Function listed in the LCO. The Completion Time(s) of the inoperable channel(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function. *and for each emergency bus* (2) *for the associated emergency bus.* (2)

A.1

(E) Condition A applies to the LOP/DG start Function with one loss of voltage or degraded voltage channel per bus inoperable.

If one channel is inoperable, Required Action A.1 requires that channel to be placed in trip within 72 hours. With a channel in trip, the LOP/DG start instrumentation channels are configured to provide a one-out-of-~~three~~ *two* logic to initiate a trip of the incoming offsite power. *Insert 1* *Insert 2* *RIT* (1) (6) (1) (1)

A Note *12* is added to allow bypassing an inoperable channel for up to 4 hours for surveillance testing of other channels. This allowance is made where bypassing the channel does not cause an actuation and where *at least* two other channels are monitoring that parameter. *normally, excluding required testing* (2)

The specified Completion Time and time allowed for bypassing one channel are reasonable considering the Function remains fully OPERABLE on every bus and the low probability of an event occurring during these intervals.

B.1

Condition B applies when more than one loss of voltage or more than one degraded voltage channel on *a single* bus is inoperable. *an emergency* (1)

Required Action B.1 requires restoring all but one channel to OPERABLE status. The 1-hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start occurring during this interval. (2)

(continued)

Rev. 1.7

ITS 3.3.5, LOP EDG START INSTRUMENTATION

INSERT 1

A plant-specific risk assessment, consistent with Reference 4, was performed to justify the 72 hour Completion Time.

R17

INSERT 2

A plant-specific risk assessment, consistent with Reference 4, was performed to justify the 12 hour time limit.

RAI
3.3.5-1
R6

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.5.2

SR 3.3.5.2 is the performance of a TADOT. This test is performed every (31) days. The test checks trip devices that provide actuation signals directly, bypassing the analog process control equipment. For these tests, the relay trip setpoints are verified and adjusted as necessary. The Frequency is based on the known reliability of the relays and controls and the multichannel redundancy available, and has been shown to be acceptable through operating experience.

for channels required by LCO 3.3.5.a and LCO 3.3.5.b

5
1
5
7

RAI 3.3.5-1 R6
TSTF 205
5
7

SR 3.3.5.3

SR 3.3.5.3 is the performance of a CHANNEL CALIBRATION.

The setpoints, as well as the response to a loss of voltage and a degraded voltage test, shall include a single point verification that the trip occurs within the required time delay, as shown in Reference 1.

A CHANNEL CALIBRATION is performed every (180) months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency of (180) months is based on operating experience and consistency with the typical industry refueling cycle and is justified by the assumption of an (180) month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

for channels required by LCO 3.3.5.9 and LCO 3.3.5.6

RAI 3.3.5-7 R6

RAI 3.3.5-1 R6

RAI 3.3.5-1 R6

RAI 3.3.5-1 R6

SR 3.3.5.3

REFERENCES

1. FSAR, Section 18.37

2. FSAR, Chapter 15, Technical Requirements manual

3. Unit Specific RTS/ESFAS Setpoint Methodology Study. (Technical Report EE-0116).

5. UPSAR, chapter 15.

4. WCAP-14333-PA, Rev. 1, October 1998.

1 7

1

1 R16

6

1

RAI 3.3.5-5 R6

RAI 3.3.5-6 R6

JUSTIFICATION FOR DEVIATIONS
ITS 3.3.5 BASES, LOP EDG START INSTRUMENTATION

1. Changes are made (additions, deletions, and/or changes) to the ISTS, which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.
2. Editorial change made for enhanced clarity or to be consistent with the ISTS Writers Guide.
3. Information or requirements have be moved from the CTS Specifications to the ITS Bases. No change in technical intent or requirement of the CTS Specification is made with this movement.
4. The criteria of the NRC Final Policy Statement on Technical Specifications Improvements have been included in 10 CFR 50.36(c)(2)(ii). Therefore, references in the ISTS Bases to the NRC Final Policy Statement are revised in the ITS Bases to reference 10 CFR 50.36.
5. Changes are made to reflect those changes made to the ISTS. The following requirements are renumbered or revised, where applicable, to reflect the changes.
6. The Bases are revised to reference a plant-specific risk assessment that is consistent with the times of WCAP-14333. This risk assessment provides the basis for the Completion Times for Action A and its Note. PAI
3.3.5-6
R6,
R17
7. The brackets have been removed and the proper plant specific information/value has been provided.

**Changes to ITS Submittal Not Associated With RAIs
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and
Application," and ITS 3.3, "Instrumentation"**

3. ITS 3.3.2 DOC LA.9 and ITS 3.3.5 DOC LA.4 moved a description of ESF RESPONSE TIME testing frequency from CTS 4.3.2.1.2 to the Bases of ITS SR 3.3.2.9 and SR 3.3.5.3. The relocated sentence states, "Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the 'Total No. of Channels' Column of Table 3.3-3." SR 3.3.2.9 and SR 3.3.5.3 are required to be performed every 18 months on a STAGGERED TEST BASIS and the relocated statement is consistent with the ITS definition of STAGGERED TEST BASIS. Therefore, adding the information to the ITS Bases was redundant to the ITS definition. The SR 3.3.2.9 and SR 3.3.5.3 Bases are revised to eliminate the relocated statements. ITS 3.3.2 DOC LA.9 and ITS 3.3.5 DOC LA.4 are deleted and ITS 3.3.2 DOC A.9 and ITS 3.3.5 DOC A.4 are modified to address the replacement of the CTS statement with the ITS definition of STAGGERED TEST BASIS.

The ITS 3.3.1 CTS markup of 4.3.1.1.2 referenced DOC LA.1 regarding the deletion of a statement addressing RTS RESPONSE TIME similar to that in CTS 4.3.2.1.2. This DOC reference was incorrect. The markup is revised to reference ITS 3.3.1 DOC A.7 and DOC A.7 is revised to address the replacement of the statement with the ITS definition of STAGGERED TEST BASIS.

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.2.9 (continued)

Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor, to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position).

For channels that include dynamic transfer functions (e.g., lag, lead/lag, rate/lag, etc.), the response time test may be performed with the transfer functions set to one with the resulting measured response time compared to the appropriate UFSAR response time. Alternately, the response time test can be performed with the time constants set to their nominal value provided the required response time is analytically calculated assuming the time constants are set at their nominal values. The response time may be measured by a series of overlapping tests such that the entire response time is measured.

Response time may be verified by actual response time test in any series of sequential, overlapping or total channel measurements, or by the summation of allocated sensor, signal processing and actuation logic response times with actual response time tests on the remainder of the channel.

ESF RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. Testing of the final actuation devices, which make up the bulk of the response time, is included in the testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

| R17

This SR is modified by a Note that clarifies that the turbine driven AFW pump is tested within 24 hours after reaching 1005 psig in the SGs.

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.5.3

This SR ensures the individual channel ESF RESPONSE TIMES are less than or equal to the maximum values assumed in the accident analysis for channels required by LCO 3.3.5.a and LCO 3.3.5.b. Response Time testing acceptance criteria are included in the TRM (Ref. 2).

RAI
3.3.5-01
R6

Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor, to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position).

For channels that include dynamic transfer functions (e.g., lag, lead/lag, rate/lag, etc.), the response time test may be performed with the transfer functions set to one with the resulting measured response time compared to the appropriate TRM response time. Alternately, the response time test can be performed with the time constants set to their nominal value provided the required response time is analytically calculated assuming the time constants are set at their nominal values. The response time may be measured by a series of overlapping tests such that the entire response time is measured.

R6

Response time may be verified by actual response time test in any series of sequential, overlapping or total channel measurements, or by the summation of allocated sensor, signal processing and actuation logic response times with actual response time tests on the remainder of the channel.

ESF RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. Testing of the final actuation devices, which make up the bulk of the response time, is included in the testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

R17

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.2.10⁹ (continued)

accident analysis. Response Time testing acceptance criteria are included in the Technical Requirements Manual Section 15 (Ref. 8). Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the Trip Setpoint value at the sensor, to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position).

For channels that include dynamic transfer functions (e.g., lag, lead/lag, rate/lag, etc.), the response time test may be performed with the transfer functions set to one with the resulting measured response time compared to the appropriate FSAR response time. Alternately, the response time test can be performed with the time constants set to their nominal value provided the required response time is analytically calculated assuming the time constants are set at their nominal values. The response time may be measured by a series of overlapping tests such that the entire response time is measured.

ESF RESPONSE TIME tests are conducted on an 180 month STAGGERED TEST BASIS. Testing of the final actuation devices, which make up the bulk of the response time, is included in the testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 180 months. The 180 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

This SR is modified by a Note that clarifies that the turbine driven AFW pump is tested within 24 hours after reaching 1000 psig in the SGs.

1005

SR 3.3.2.11¹⁰

SR 3.3.2.11 is the performance of a TADOT as described in SR 3.3.2.10 except that it is performed for the P-4 Reactor

(continued)

Rev. 17

6

1

6

1

TSTF III 8

2

2

2

IR17

2

} 6

R17

ITS 3.3.5, LOP EDG START INSTRUMENTATION

devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

R17

(A.1)

03-09-00

ITS
3.3
3.3.1

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

LCO
3.3.1

3.3.1.1 (Risk-Informed) As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

INSERT PROPOSED Note (A.2)

Action
A

As shown in Table 3.3-1.

INSERT PROPOSED ACTION A (A.3)

SURVEILLANCE REQUIREMENTS

SRs
3.3.1.1 →
3.3.1.15

4.3.1.1.1 Each reactor trip system instrumentation channel, interlock, and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

(A.4)

SR
3.3.1.16

Proposed Note
4.3.1.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Response of the neutron flux signal portion of the channel time shall be measured from the detector output or input of the first electronic component in the channel. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

on a STAGGERED TEST BASIS (A.7)

(L.20)

(A.1)

(L.A.1)

(A.7)

(A.7) R17

A.1

03-09-00

ITS
3.3
3.3.1

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

LCO
3.3.1

3.3.1.1 (Risk-Informed) As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

Action
A

As shown in Table 3.3-1

INSERT PROPOSED
NOTE

A.2

INSERT PROPOSED
ACTION A

A.3

SURVEILLANCE REQUIREMENTS

SRs
3.3.1.1 →
3.3.1.15

4.3.1.1.1 Each reactor trip system instrumentation channel, interlock, and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

A.4

Proposed Note

ON A STAGGERED TEST BASIS

SR
3.3.1.16

4.3.1.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Response of the neutron flux signal portion of the channel time shall be measured from the detector output or input of the first electronic component in the channel. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

A.7

C.2

A.1

LA.1

A.7

A.7 / R.17

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

- A.7 CTS Surveillance Requirement 4.3.1.1.2 states, in part, that the RTS Response Time of each trip function shall be demonstrated to be within its limit at least on per 18 months. The requirement specifies that each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1. A column added to CTS Table 4.3-1 addresses each function, and which the RESPONSE TIME testing requirement is applicable. The RESPONSE TIME requirements reflect the channel requirements contained in the Technical Requirements Manual (TRM) Section 6.2. This does not modify the CTS requirements, but provides clarification. ITS SR 3.3.1.16 requires the verification of RTS RESPONSE TIMES be with limits every 18 months on a STAGGERED TEST BASIS. The ITS definition of STAGGERED TEST BASIS is consistent with the CTS testing Frequency. This changes the CTS by utilizing the ITS definition of STAGGERED TEST BASIS. R17

This change is acceptable because the requirements for RESPONSE TIME testing for the RTS channels remain unchanged. ITS definition for STAGGERED TEST BASIS and its application in this requirement do not change the current testing frequency requirements. This change is designated as administrative because it does not result in technical changes to the CTS. R17

- A.8 CTS Table 3.3-1 for the RTS Functions does not list Action 11 to be entered for an inoperable channel. ITS 3.3.1 does not convert the Action to an ITS Condition for any of the required RTS Functions. This changes the CTS by eliminating Action 11.

This change is acceptable because no CTS or ITS RTS function relies upon the compensatory measures of Action 11 to ensure proper operation or safety of the plant. With the deletion, no technical requirements of the CTS are changed. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.9 Not used. RAI
3.3.1-08
RS

- A.10 CTS Surveillance Requirements (SRs) for the Intermediate Range channels in Table 4.3-1 list a CHANNEL CHECK at a frequency of Q⁽¹²⁾ for the MODES 3*, 4*, and 5* applicability. The SRs listed for the Intermediate Range channels with the applicability in MODES 1 and 2 require the performance of a CHANNEL CHECK at a frequency of each shift (S), a CHANNEL CALIBRATION at a refueling frequency (R^(6,13)), and a CHANNEL FUNCTIONAL TEST at the frequency of each startup (S/U⁽¹⁾) and quarterly (Q⁽¹²⁾). CTS Table 3.3-1 requires the Intermediate Range channels to be OPERABLE in MODES 1^{###} and 2. The ^{###} represent "Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint" for the applicability. CTS Action 3 must be entered for an inoperable channel. The applicability for Intermediate Range channels is set above the P-6 setpoint in Action 3 Part a. This states, "Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint." ITS 3.3.1 Function RAI
3.3.1-09
RS

ITS

A.1

ITS 3.3.2

03-09-00

3.3
3.3.2

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

LCO
3.3.2

3.3.2.1 (Risk-Informed) The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

L.A.1

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

Action
A

- a. ~~INSERT PROPOSED NOTE TO ACTIONS~~
With an ESFAS instrumentation channel/trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4 declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

A.2

L.A.1

A.2

L.A.1

A.2

SURVEILLANCE REQUIREMENTS

SRs
3.3.2.1 →
3.3.2.8
and
3.3.2.10

4.3.2.1.1 Each ESFAS instrumentation channel, interlock, and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Features Actuation System instrumentation surveillance requirements specified in Table 4.3-2.

A.3

SR
3.3.2.9

4.3.2.1.2 The ENGINEERED SAFETY FEATURE RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. ^{ON A STAGGERED TEST BASIS} Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

A.9

A.9

A.9 / R17

(A.1)

ITS
3.3
3.3.2

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
LIMITING CONDITION FOR OPERATION

LC0
3.3.2

3.3.2.1 (Risk-Informed) The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4

(L.A.1)

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

Action
A

~~INSERT PROPOSED NOTE to Actions~~

(A.2)

a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.

(L.A.1)

(A.2)

(L.A.1)

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

(A.2)

SURVEILLANCE REQUIREMENTS

SRS
3.3.2.1
3.3.2.8
and
3.3.2.10

4.3.2.1.1 Each ESFAS instrumentation channel, interlock, and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Features Actuation System instrumentation surveillance requirements specified in Table 4.3-2

(A.3)

SR
3.3.2.9

4.3.2.1.2 The ENGINEERED SAFETY FEATURE RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

on a STAGGERED TEST BASIS

(A.9)

(A.9)

(A.9) | R17

DISCUSSION OF CHANGES
ITS 3.3.2, ESFAS

logic train such that both logic trains are tested at least once per 36 months and one channel per function such that both logic trains are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3." ITS SR 3.3.2.9 requires the verification that ESFAS RESPONSE TIMES are within limits every 18 months on a STAGGERED TEST BASIS. The ITS definition of STAGGERED TEST BASIS is consistent with the CTS testing Frequency. This changes the CTS by utilizing the ITS definition of STAGGERED TEST BASIS.

R17

This change is acceptable because the requirements for ESFAS RESPONSE TIME testing for the ESFAS channels remain unchanged. ITS definition for STAGGERED TEST BASIS and its application in this requirement do not change the current testing frequency requirements. This change is designated as administrative because it does not result in technical changes to the CTS.

R17

- A.10 CTS ESFAS system interlocks P-11 and P-12 are required to be OPERABLE in MODES 1, 2, and 3. If a channel becomes inoperable, Action 22 must be entered. The Action requires with less that the Minimum Channels within 1 hour determine, "that the interlock is in its required state for the existing plant condition or apply Specification 3.0.3." ITS requirements for the ESFAS interlocks P-11 and P-12 require the functions to be OPERABLE in MODES 1, 2, and 3. If a channel becomes inoperable Action J must be entered. The Action requires a verification of the interlocks are in their required state for plant conditions within 1 hour or be in MODE 3 within 7 hours and MODE 4 within 13 hours. This changes the CTS by specifically stating shutdown requirements in specified time requirements in the Action.

This change is acceptable because the Required Actions and Completion Times are the same as the CTS requirements. CTS LCO 3.0.3 allows 1 hour and 6 additional hours to reach HOT STANDBY and 6 more hours to reach HOT SHUTDOWN. This change maintains the technical requirements of the CTS in the ITS format. The change is designated as administrative because the technical requirements remain unchanged.

- A.11 CTS Functional Unit 1.d of Table 3.3-3 specifies Pressurizer Pressure – Low-Low shall be OPERABLE in MODES 1, 2, 3[#]. The notation [#] states the function may be blocked in MODE 3 below P-11 setpoint. ITS Table 3.3.2-1 requires Pressurizer Pressure – Low Low function to be OPERABLE in MODES 1, 2, and 3^(a). Note ^(a) states, "Above the P-11 setpoint." This changes the CTS by providing a clarification for the functional requirements.

This change is acceptable because the ITS requirement states the applicability in the terms of when the function is required to be OPERABLE. CTS stated the requirement in terms of an exception and did not state the specific applicability requirements. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

DISCUSSION OF CHANGES
ITS 3.3.2, ESFAS

because procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

- LA.7 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.3.2.1 in Table 3.3-4 item 5.a for the Allowable Value requirement contains information relating to the Steam Generator (SG) Water Level – High High trip. This states that the Allowable Values are associated with the narrow range instrumentation span for each SG. ITS Table 3.3.2-1 (item 5.a) lists the requirements for the SG Water Level – High High Allowable Values but does not contain the information about the narrow range instrumentation span. This changes the CTS by moving the information from the Specification to the ITS Bases.

The removal of these details, which are related to system design, from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the Action and Surveillance requirement to ensure the function remains OPERABLE. Also, this change is acceptable because the removed information will be adequately controlled in the ITS Bases. Changes to the Bases are controlled by the Technical Specification Bases Control Program in Chapter 5. This program provides for the evaluation of changes to ensure the Bases are properly controlled. This change is designated as a less restrictive removal of detail change because information relating to system design is being removed from the Technical Specifications.

- LA.8 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting)* CTS requirement listed in Table 3.3 – 3, for each ESFAS interlock function, an Allowable Value and a Setpoint column. ITS Table 3.3.2-1 includes only an Allowable Value column. This changes the CTS by moving the Setpoint information from the Specification to the Technical Requirements Manual (TRM). | RB

The removal of these details for performing actions from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the Actions, Surveillance requirements, and Allowable Values to ensure the functions remain OPERABLE. Also, this change is acceptable because the removed information will be adequately controlled in the TRM. Changes to the TRM are made under 10 CFR 50.59, which ensures changes are properly evaluated. This change is designated as a less restrictive removal of detail change because procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications. | RB

- LA.9 Not used. | RB

DISCUSSION OF CHANGES
ITS 3.3.2, ESFAS

R17

LA.10 (*Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems*) CTS Action 22 for Table 3.3-3 requires for applicable instrumentation channels that, “With less than the Minimum Channels OPERABLE, within one hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition.” ITS 3.3.2 in Table 3.3.2-1 for Action J requires, “One or more channels inoperable, verify interlock is in required state for existing unit condition within one hour.” The allowance provided by “determine by observation of the associated permissive annunciator window(s)” is not included in the ITS. This changes the CTS by moving the information from the Specification to the ITS Bases.

R6

The removal of these details for performing actions from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the Action and Surveillance requirement to ensure the function remains OPERABLE. All necessary requirements for the function remain in the Technical Specifications. Changes to the Bases are controlled by the Technical Specification Bases Control Program, described in Chapter 5 of the ITS. This requirement provides for control of changes to the Bases and will ensure that any changes to the Bases are properly evaluated. This change is designated as a less restrictive removal of detail change because procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

R6

R6

LA.11 (*Type 1 – Removing Details of System Design and System Description, Including Design Limits*) CTS requirements in Table 3.3-3 for function 2.a, Containment Spray Manual, lists the total number of channels as 2 sets 2 switches/set. ITS 3.3.2 Table

A.1

03-09-00

RAI 3.3.5-1 RB

ITS 3.3 3.3.5

INSTRUMENTATION Loss of Power (LOP) Emergency Diesel Generator (EDG)
3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
LIMITING CONDITION FOR OPERATION

A.2

LCO 3.3.5

3.3.2.1 (Risk-Informed) The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4. *see ITS 3.3.2* *insert proposed ITS LCO 3.3.5* (M.3)

LA.2

APPLICABILITY: As shown in Table 3.3-3.

A.3

Note Action A

ACTION: insert proposed Note to proposed Actions

A.1

a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value. *inoperable*

LA.1

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

A.2

SURVEILLANCE REQUIREMENTS

SR 5 3.3.5.1 3.3.5.2

4.3.2.1.1 Each ESFAS instrumentation channel, interlock, and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Features Actuation System instrumentation surveillance requirements specified in Table 4.3-2.

RAI 3.3.5-1 RB

ON A STAGGERED TEST BASIS (A.4)

3.3.5.3

4.3.2.1.2 The ENGINEERED SAFETY FEATURE RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No of Channels" Column of Table 3.3-3.

(M.4)

LCO 3.3.5.b Function Requirements

A.4

A.4

A.1

03-09-00

RAI 3.3.5-1 26

ITS 3.3 3.3.5

INSTRUMENTATION
3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
LIMITING CONDITION FOR OPERATION

A.2

LCO 3.3.5

3.3.2.1 (Risk-Informed) The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

sec ITS 3.3.2

INSERT PROPOSED ITS LCO 3.3.5

M.3

LA.2

APPLICABILITY: As shown in Table 3.3-3.

Note

ACTION: ~~Insert proposed Note to proposed Action 5~~

A.3

Action A

- a. With an ESFAS instrumentation channel ~~trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.~~
- b. With an ESFAS instrumentation channel ~~inoperable, take the ACTION shown in Table 3.3-3.~~

A.1

LA.1

LA.2

A.2

SURVEILLANCE REQUIREMENTS

SRS

3.3.5.1 3.3.5.2

4.3.2.1.1 Each ESFAS instrumentation channel, interlock, and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Features Actuation System instrumentation surveillance requirements specified in Table 4.3-2

RAI 3.3.5-1 26

A.4

ON A STAGGERED TEST BASIS (A.4)

LCO 3.3.5.6 FUNCTION Requirements

3.3.5.3

4.3.2.1.2 The ENGINEERED SAFETY FEATURE RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

A.4

A.4 | R17

DISCUSSION OF CHANGES
ITS 3.3.5, LOP EDG START INSTRUMENTATION

months. The requirement states, "Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that both logic trains are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3." ITS SR 3.3.5.3 requires the verification of ESFAS RESPONSE TIMES are within limits every 18 months on a STAGGERED TEST BASIS. The ITS definition of STAGGERED TEST BASIS is consistent with the CTS testing Frequency. This changes the CTS by utilizing the ITS definition of STAGGERED TEST BASIS. This also changes the CTS by removing the references to logic train testing as the LOP EDG start instrumentation does not have logic trains.

R17

This change is acceptable because the requirements for ESFAS RESPONSE TIME testing for the ESFAS channels remain unchanged. ITS definition for STAGGERED TEST BASIS and its application in this requirement do not change the current testing frequency requirements. The ITS separates the LOP EDG start instrumentation, which does not have logic trains, from other ESFAS functions. Therefore, the CTS reference to logic trains is not required in ITS 3.3.5. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.5 CTS Table 4.3-2 lists for Functional Unit 7, Loss of Power 4.16KV Emergency Bus requirements for a quarterly CHANNEL FUNCTIONAL TEST for the Loss of Voltage and Degraded Voltage functions. The CHANNEL FUNCTIONAL TEST does not require a verification of relay setpoints for the Loss of Voltage and Degraded Voltage functions. ITS SR 3.3.5.1 states that a TADOT must be performed every 92 days. The SR is modified by a Note that states, "Verification of setpoint is not required." This changes the CTS by specifically stating that setpoint verification is not required for the required quarterly testing.

R6

This change is acceptable because the verification of the relay setpoints require elaborate bench calibration and this is performed during the CHANNEL CALIBRATION. The CHANNEL CALIBRATION is performed every 18 months. The verification of relay setpoints has been consistently within the limits of the 18-month requirements. Therefore, the addition of the Note to the SR does not modify the CTS and is provided to clarify the requirement. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

MORE RESTRICTIVE CHANGES

- M.1 CTS Table 3.3-4, Engineered Safety Feature Actuation System Instrumentation Trip Setpoints, lists the Allowable Values for the Loss of Power on the 4160-Volt Emergency Bus Undervoltage for degraded voltage. The degraded voltage Allowable Value is stated as, "≥ 3688 volts with a time delay of ≤ 63 seconds." This requirement is translated into ITS SR 3.3.5.2 and states the degraded voltage

RA1
3.3.5-1
R16

DISCUSSION OF CHANGES
ITS 3.3.5, LOP EDG START INSTRUMENTATION

be functionally tested up to and including input coil continuity testing to the ESF relays." ITS SR 3.3.5.1 requires a TADOT to be performed every 92 days. The ITS does not contain the requirements of Note 5. This changes the CTS by moving the requirement of Note 5 to the Bases.

The removal of these details for performing actions from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. ITS Bases contain the details for determining the OPERABILITY for a function. This type of information is consistent with that level of detail and is moved to the Bases. Changes to the Bases are controlled by the Technical Specification Bases Control Program in Chapter 5. This program provides for the evaluation of changes to ensure the Bases are properly controlled. This change is categorized as less restrictive removal of details because information has been moved from the Technical Specifications to the Bases.

R6

LA.4 Not used.

R6,

R17

LA.5 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Table 3.3-3 for Engineered Safety Feature Actuation System (ESFAS) instrumentation has three columns stating various requirements for each function. These columns are labeled, "TOTAL NO. OF CHANNELS," "CHANNELS TO TRIP," and "MINIMUM CHANNELS OPERABLE." ITS Table 3.3.2-1 states the channel requirement for each ESFAS function as, "REQUIRED CHANNELS." This changes the CTS by stating all of the channel requirements for each function as the required channels and moving the information of the number of channels to trip and the minimum channels needed to maintain the function OPERABLE to the UFSAR.

RAI
3.35-1

R6

**Changes to ITS Submittal Not Associated With RAIs
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and
Application," and ITS 3.3, "Instrumentation"**

4. ITS 3.3.1 DOC M.8 stated that the CTS 4.0.4 exception applied to the Intermediate Range CHANNEL CALIBRATION was not needed because the CHANNEL CALIBRATION could be performed without affecting the OPERABILITY of the channel being tested. This statement is misleading and is revised. The Intermediate Range channels are required to be OPERABLE in MODE 2 above the P-6 interlock. The CTS 4.0.4 exception is not needed in the ITS because the CHANNEL CALIBRATION can be performed in MODE 2 prior to exceeding the P-6 interlock. Therefore, no exception is needed to perform the testing because the test can be performed before the channel is required to be OPERABLE. This did not result in any changes to the ITS, ITS Bases, or CTS markups.

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

designated as more restrictive because the additional restrictions have been placed on the CTS requirements.

RAI
3.3.1-23
R5

- M.7 CTS Table 4.3-1 lists the surveillance requirements of CHANNEL CALIBRATION for the Turbine Trip Function 18.A Auto Stop Oil Pressure and Function 18.B Turbine Stop Valves Closure as Not Applicable (N/A). ITS Table 3.3.1-1 Function 16 Turbine lists the CHANNEL CALIBRATION surveillance requirement for the Auto Stop Oil Pressure and Turbine Stop Valve Closure as SR 3.3.1.10. This must be performed at a Frequency of 18 months. This SR is modified by a Note that requires the verification that time constants are adjusted to prescribed values. This changes the CTS by adding a CHANNEL CALIBRATION requirement for the Turbine Trip functions.

RAI
3.3.1-24
R5

The purpose of ITS SR 3.3.1.10 is to ensure the channels are aligned to provide an accurate representation of the monitored function including any required time constants. This change is acceptable because the periodic verification of the Allowable Values is necessary to ensure the turbine will trip at the specified values. The CHANNEL CALIBRATION is added to provide appropriate Technical Specification OPERABILITY requirements to ensure the function can perform its safety function. The ITS Note ensures the time constants requirement is explicitly stated. The time constants for various functions are currently verified under CTS requirements. The addition of the ITS Note to the surveillance requirement is considered an administrative change. This change is designated as more restrictive because the current requirement for the Turbine Trip does not require periodic CHANNEL CALIBRATION verification.

RAI
3.3.1-24
R12

- M.8 CTS Table 4.3-1 contains a Surveillance Requirement for the Intermediate Range channels. A CHANNEL CALIBRATION is required and modified by a footnote. Note 13 states, "The provisions of Specification 4.0.4 are not applicable for entry in MODE 2 or 1." ITS SR 3.3.1.11 for the Intermediate Ranges requires a CHANNEL CALIBRATION every 18 months. A Note modifies the SR. The Note states, "Neutron detectors are excluded from CHANNEL CALIBRATION." This changes the CTS by deleting a portion of the Note allowing the Specification 4.0.4 allowance.

R5
R12

R5

MB1433
MB1427
R8, R15
RAI
3.3.1-39
R5, R15

This change is acceptable because the Specification 4.0.4 exception is not necessary because the Surveillance Requirement may be performed without entering the ITS Applicability for the function (i.e., MODE 2 above the P-6 interlock). This change is designated as more restrictive because an allowance of the CTS has been deleted in the ITS requirements, and because a new requirement has been added to the SR.

R17

**Changes to ITS Submittal Not Associated With RAIs
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and
Application," and ITS 3.3, "Instrumentation"**

5. ITS 3.3.1 DOC A.15 describes the requirements on the Source Range Neutron Flux - Shutdown function and changes to the presentation of the required number of channels. This DOC also discussed a change in the Applicability of the Source Range Neutron Flux - Shutdown function from MODES 3, 4, and 5 with the RTBs open to MODES 3, 4, and 5 with the rod control system incapable of rod withdrawal. This aspect is a less restrictive change. DOC A.15 was revised and DOC L.29 was added to discuss this change. The CTS markup was revised to reference DOC L.29. The ITS and ITS Bases are not affected by this change.

A.1

TABLE 3.3-1
REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES & Conditions ACTION
1. Manual Reactor Trip	2	1	2	1, 2 (A.1) Proposed Note a 3, 4, and 5
2. Power Range, Neutron Flux	4	2	3	1, 2 (High) (A.1) (A.2.1) (Low) (A.12) (B) (C) (A.2.1) (E) (M.2)
3a. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2 (A.12) (E) (M.2)
3b. Power Range, Neutron Flux High Negative Rate	4	2	3	1, 2 (A.12) Proposed Note b (F) (M.3) (G) (L.4) (L.5)
4. Intermediate Range, Neutron Flux	2	1	2	1, 2 Proposed Note c (L.27)
5. Source Range, Neutron Flux	2	1	2	1, 2 Proposed Note d (A.2) (H) (M.4)
A. Startup	2	1	2	1, 2 Proposed Note a (A.1) (I) (M.5)
B. Shutdown	2	1	2	1, 2 Proposed Note a (A.1) (J) (L.16)
C. Shutdown	2	0	1	1, 2 Proposed Note c (L.29) 3, 4 and 5 (K) (M.6)
6. Overtemperature ΔT	3	2	2	1, 2 (A.12) (E) (A.17)

RAI 3.3.1-7
RS

RAI 3.3.1-9
RS

RAI 3.3.1-7
RS

RAI 3.3.1-7
RS

ITS 3.3.1
03-09-00

A.1

TABLE 3.3-1
REACTOR TRIP SYSTEM INSTRUMENTATION

NORTH ANNA - UNIT 2

ITS

3/4-3-2

page 2 of 22

Amendment No. 71-187, 202

Rev 17

ITS	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS ^{A.5}	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES ^{A.5}	CONDITION ACTION ^{A.5}	RAI 3.3.1-7 RS
1	1. Manual Reactor Trip	2	1	2	1, 2 ^{A.1}	(2) B - (A.1)	
		2	1	2	^{Proposed Note a} 3, 4 and 5	(3) C - (L.1)	
2	2. Power Range, Neutron Flux ^{High}	4 ^{A.21}	2	3	1, 2	(4) D - (M.2)	
	^{Low}	4			1, 2	(4) E - (A.21)	
3a	3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	(2) A.12 (4) E - (M.2)	
3b	4. Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	(2) A.12 (4) E - (M.2)	
4	5. Intermediate Range, Neutron Flux	2	1	2	^{Proposed Note b} 1, 2 ^{A.10}	(1) F - (L.4)	
					^{Proposed Note c} 2, 3 ^(L.27)	(2) G - (M.3)	
5	6. Source Range, Neutron Flux					(3) H - (L.5)	RAI 3.3.1-9 RS
	A. Startup	2	1	2	^{Proposed Note d} 2 ^{LA.2}	(2) H - (M.4)	
	B. Shutdown	2	1	2	^{Proposed Note a} 2 ^{A.11}	(2) I - (M.5)	
	C. Shutdown	^{(2) 1} ^{A.15}	0	1	^{Proposed Note a} 3, 4 and 5 ^(L.27)	(3) J - (M.5)	R17
					^{Proposed Note e} 3, 4 and 5	(3) K - (L.18)	
6	7. Overtemperature ΔT	3	2	2	1, 2	(3) A.12 (4) E - (M.6)	
						(3) E - (A.17)	

LA.15 | RAI 3.3.1-7 RS

03-09-00

ITS
N.3.1

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

trip setpoints within their necessary range and accuracy. The TADOT is defined in a similar manner for the trip actuation device. The TADOT requirements provide for a digital or bistable channel testing requirements of the CTS CFT requirements. The ALT verifies the OPERABILITY of the logic circuits and its required outputs. This type of testing is required in the CTS requirements by the monthly CFT for the Automatic Trip Logic. This change is designated as administrative because it does not result in technical changes to the CTS surveillance requirements.

RAI
3.3.1-10
RS

- A.12 CTS 3.3.1.1 Actions denoted with a # in Table 3.3-1 state that the provisions of Specification 3.0.4 are not applicable. The ITS does not contain this exception, but provides the same allowance in the requirements of LCO 3.0.4. This change modifies the CTS by eliminating the specific exception to Specification 3.0.4 and utilizing a generic exception described in LCO 3.0.4.

R17

This change is acceptable because ITS LCO 3.0.4 states when an LCO is not met, entry into the applicable MODE may be made when the associated Actions permit continued operation for an unlimited period of time. The Actions modified by note # allow continued operation for an unlimited period of time. Therefore, eliminating the specific exceptions to CTS 3.0.4 is appropriate because the allowance is addressed in ITS LCO 3.0.4. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.13 Not used.

RAI
3.3.1-11
RS

- A.14 CTS surveillance requirement in Table 4.3-1 for the SI input from ESF is stated as M⁽⁴⁾. Note ⁽⁴⁾ states the following "Manual ESF functional input check every 18 months." The monthly requirement is therefore only required to check the input from ESF on an 18 monthly frequency. ITS 3.3.1 for function 17, SI input from ESF, requires SR 3.3.1.14 to be performed. This requirement performs a TADOT every 18 months. A Note modifies the requirement that specifies that verification of setpoint is not required. This change maintains the technical requirements of the CTS in ITS format.

This change is acceptable because the current requirement is only performed every 18 months to verify the SI input. No setpoint verification is required with the input from ESF and therefore, the Note modifying the SR does not change the technical intent from the CTS requirement. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.15 CTS 3.3.1.1 requirements for Functional Unit 6.C, Source Range Neutron Flux Shutdown, are stated in CTS Table 3.3-1. The total number of Source Range channels is listed as two, and the minimum channels OPERABLE is listed as one. Note 5 does not require any action unless no channels are OPERABLE. This requirement is applicable in MODES 3, 4, and 5 with the RTBs open. ITS 3.3.1 requirement for the Source Range Neutron Flux, Function 5, is stated in ITS Table 3.3.1-1, and lists the number of required channels as one. The Table lists the applicability or other

RAI
3.3.1-12
RS

R17

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

specified conditions as MODES 3(e), 4(e), and 5(e). Note (e) states, "With the Rod Control System incapable of rod withdrawal. In this condition, source range Function does not provide reactor trip but does provide indication." This change maintains the CTS technical requirements for the number of OPERABLE Source Range channels. The addition of Note (e) is addressed in DOC L.29.

RAI
3.3.1-2
RS

This change is acceptable because the CTS requirements are maintained with the conversion to the ITS format. The ITS number of required Source Range channels is one, which is the same as the CTS requirement. This change is designated as administrative because it does not result in technical changes to the CTS.

R17

- A.16 CTS functions for the RTS Interlocks in Table 3.3.-1 require Action 17 to be entered for an inoperable channel. Action 17 states with less than the Minimum Channels OPERABLE, within one hour verify that the interlocks are in the required state for plant conditions, or apply Specification 3.0.3. ITS function 18, the RTS interlocks list Conditions Q and R to be entered for an inoperable channel. Required Action Q.2 requires the unit to be placed in MODE 3 within 7 hours. Required Action R.2 requires the unit to be placed in MODE 2 within 7 hours. This changes the CTS from the LCO 3.0.3 statement to specific required actions to be performed.

This change is acceptable because the ITS Required Actions place the unit in a condition within the time allowed by CTS LCO 3.0.3 for each of the functional interlocks. Function P-6 and P-10 are required to be OPERABLE in MODE 2 therefore the required action places the unit into MODE 3 within 7 hours. Functions P-7, P-8, and P-13 are required to be OPERABLE in MODE 1, therefore the required action requires the unit to be placed in MODE 2 with 7 hours. This change is designated as administrative because it does not result in technical changes to the CTS.

- A.17 CTS Action 7 is required to be performed when the Overttemperature, Overpower, Pressurizer Pressure – High, Steam Generator (SG) Water Level – Low Low, and Steam/Feed Flow Mismatch and Low SG Water Level functions have a required channel become inoperable. Each of the functions is required to be OPERABLE in MODES 1 and 2. Action 7 states that the inoperable channel must be placed in trip within 72 hours, and if this is not satisfied, the unit must be placed in HOT STANDBY in 6 hours, HOT SHUTDOWN within the next 6 hours and COLD SHUTDOWN in the following 30 hours. ITS 3.3.1 for the Overttemperature, Overpower, Pressurizer Pressure – High, Steam Generator (SG) Water Level – Low Low, and SG Water Level Low coincident with Steam Flow /Feed Flow Mismatch

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

Trip channel becomes inoperable. Condition N states, "Place channel in trip," within 72 hours, or "Reduce THERMAL POWER < P-8," within 76 hours. This changes the CTS by stating the applicability for these functions so that they are compatible with their Required Actions.

This change is acceptable because the Reactor Trip functions are required to be OPERABLE in the MODES assumed by the safety analysis for each function to provide its safety function. The UFSAR Section 7.2.1.3.2 states the following; "Interlock P-7 blocks a reactor trip at low power (below approximately 10% of full power) on a low reactor coolant flow or reactor coolant pump open breaker signal in more than one loop, reactor coolant pump undervoltage, reactor coolant pump underfrequency, pressurizer low pressure, or pressurizer high water level . . . The P-8 interlock blocks a reactor trip when the plant is below approximately 30% of full power, on a low reactor coolant flow in any one loop, a reactor coolant pump breaker open signal in any one loop, or turbine trip signal. Below the P-8 setpoint, the reactor will not trip with a turbine trip, or with one inactive loop. This change coordinates the various functions' applicability with the Required Actions associated with each function for an inoperable channel. The Applicable MODES or other specified conditions for these functions are aligned to the OPERABILITY assumptions of the safety analysis. This change is designated as less restrictive because the LCO requirements are applicable in fewer operating conditions than in the CTS.

RAI
3.3.1-08
R12

RAI
3.3.1-08
R5

- L.29 (*Category 2 – Relaxation of Applicability*) CTS 3.3.1.1 requirements for Functional Unit 6.C, Source Range Neutron Flux Shutdown, are stated in CTS Table 3.3-1. This requirement is applicable in MODES 3, 4, and 5 with the RTBs open and requires one source range channel to be OPERABLE. When the RTBs are closed and the rod control system is capable of rod withdrawal, the CTS requires two source range channels to be OPERABLE. ITS 3.3.1 requirement for the Source Range Neutron Flux, Function 5, is stated in ITS Table 3.3.1-1. The Table lists the applicability or other specified conditions as MODES 3(e), 4(e), and 5(e). Note (e) states, "With the Rod Control System incapable of rod withdrawal. In this condition, source range Function does not provide reactor trip but does provide indication." When the rod control system is capable of rod withdrawal, the CTS and the ITS require two source range channels to be OPERABLE. When the rod control system is not capable of rod withdrawal, the ITS requires one source range channel to be OPERABLE. This changes the CTS by requiring ITS Function 5 in MODES 3, 4, and 5 when the rod control system is incapable of rod withdrawal instead of MODES 3, 4, and 5 when the RTBs are open. This allows only one source range channel to be OPERABLE in conditions when the CTS would require two source range channels to be OPERABLE.

R17

The purpose of the source range requirements is to ensure that adequate indications of source range neutron flux are available. This change is acceptable because the requirements continue to ensure that the structures, systems, and components are maintained in the MODES and other specified conditions assumed in the safety

DISCUSSION OF CHANGES
ITS 3.3.1, RTS INSTRUMENTATION

analyses and licensing basis. When the rod control system is incapable of rod withdrawal, either by opening the RTBs or with the RTBs closed and some other method used to prevent rod withdrawal, the source range channels are not being relied on to provide a reactor trip. Therefore, only one source range channel is needed to provide source range indication of neutron flux. Relaxing the applicability to allow the RTBs to be closed if rod withdrawal is prohibited by another means allows certain types of testing to be performed in this condition while not compromising core reactivity control. This change is designated as less restrictive because the LCO requirements are applicable in fewer operating conditions than in the CTS.

R17

Changes to ITS Submittal Not Associated With RAIs
Beyond Scope Issue MB 2074, ITS 3.9.1, "Boron Concentration," ITS 3.0, "Use and Application," and ITS 3.3, "Instrumentation"

6. ITS 3.3.2 DOC LA.2 describes the relocation of CTS Table 4.3-2, Notation (2) to the Bases. DOC LA.2 is revised to describe what portion of Notation (2) is relocated to the Bases of SR 3.3.2.3. The ITS, ITS Bases, and CTS markups are not affected by this change.

DISCUSSION OF CHANGES
ITS 3.3.2, ESFAS

equivalent. This changes the CTS by increasing the testing Frequency from once per refueling cycle to each time the reactor trip breaker is cycled.

The purpose of the ITS SR 3.3.2.10 is to ensure the verification of the P-4 interlock on each cycle of the RTBs. The CTS CHANNEL FUNCTIONAL TEST is equivalent to the TADOT as stated in SR 3.3.2.10. This change is acceptable because verifying the OPERABILITY of the P-4 interlock more frequently the proper operation of the Reactor Trip System. Each time the interlock is required to perform its required function, it will be tested. This change is designated as more restrictive because the testing frequency has been increased from the CTS requirements.

RAI
3.3.2-6
RB,
R16

REMOVED DETAIL CHANGES

- LA.1 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting)* CTS LCO 3.3.2.1 and Action a contain information about the ESFAS channels and interlocks setpoint requirements. The LCO states the setpoint will be set consistent with the Trip Setpoints listed in Table 3.3-4. Action a requires the setpoint to be set more conservatively than the value listed in the Allowable Value column of the same table in order for the function to be considered OPERABLE. ITS 3.3.2 does not contain this information. DOC LA.8 describes the relocation of the setpoint values to the Technical Requirements Manual (TRM). This changes the CTS by moving the information from the Specification to the TRM.

RAI
3.3.2-14
RB,
R16

The removal of these details for performing actions from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The Allowable Value is the value assumed in the safety analyses. The trip setpoint is used to ensure that the Allowable Value is met, but is not used in the safety analyses. Therefore, relocating the trip setpoint to the TRM and retaining the Allowable Value in the Technical Specifications is acceptable. The ITS still retains the LCO and Actions requirements, and Allowable Values to ensure the functions remain OPERABLE. Also, this change is acceptable because the removed information will be adequately controlled in the TRM. Changes to the TRM are made under 10 CFR 50.59, which ensures changes are properly evaluated. This change is designated as a less restrictive removal of detail change because procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

- LA.2 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Table 4.3-2 specifies a requirement to perform a CHANNEL FUNCTIONAL TEST for the automatic actuation logic on various ESF functions on a monthly basis. The frequency (M) is modified by notation (2) which states, "Each train or logic channel shall be functionally tested at least every other 31 days up to and including input coil continuity testing to the ESF slave relays." ITS SRs 3.3.2.2 and 3.3.2.3 require the performance of the ACTUATION LOGIC TEST and the MASTER RELAY TEST every 31 days on a STAGGERED TEST BASIS. This

DISCUSSION OF CHANGES
ITS 3.3.2, ESFAS

changes the CTS by moving the requirement that the testing include input coil continuity testing to the ESF slave relays from the Specification to the Bases of SR 3.3.2.3.

R17

The removal of these details, which are related to system design, from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the Action and Surveillance requirement to ensure the function remains OPERABLE. Also, this change is acceptable because the removed information will be adequately controlled in TS Bases. Changes to the Bases are controlled by the Technical Specification Bases Control Program in Chapter 5. This program provides for the evaluation of changes to ensure the Bases are properly controlled. This change is designated as a less restrictive removal of detail change because information relating to system design is being removed from the Technical Specifications.

- LA.3 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.3.2.1 in Table 3.3-4, item 6.c, for the Allowable Values requirement contains information relating to the Steam Generator (SG) Water Level – Low Low trip. The requirement states that the Allowable Value is associated with the narrow range instrumentation span for each SG. ITS Table 3.3.2-1 (item 6.c) lists the requirements for the SG Water Level – Low Low Allowable Value but does not contain the information about the narrow range instrumentation span. This changes the CTS by moving the information from the Specification to the Bases.

The removal of these details, which are related to system design, from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the Action and Surveillance requirement to ensure the function remains OPERABLE. Also, this change is acceptable because the removed information will be adequately controlled in the ITS Bases. Changes to the Bases are controlled by the Technical Specification Bases Control Program in Chapter 5. This program provides for the evaluation of changes to ensure the Bases are properly controlled. This change is designated as a less restrictive removal of detail change because information relating to system design is being removed from the Technical Specifications.

- LA.4 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.3.2.1 in Table 3.3-3 for the ESFAS interlocks P-11 and P-12 contains information in the Condition and Function sections which describes how the interlocks function. ITS Table 3.3.2-1 lists the functions and the necessary requirements to ensure OPERABILITY. This changes the CTS by moving the information from the Specification to the ITS Bases.

The removal of these details, which are related to system design, from the Technical Specifications is acceptable because this type of information is not necessary to be