NORTH ANNA POWER STATION

Section 3.3
Instrumentation – Book 2

VOLUME 10

Improved Technical Specifications

Dominion

SECTION 3.3 - INSTRUMENTATION

CURRENT TECHNICAL SPECIFICATIONS

MARKUP AND DISCUSSION OF CHANGES

UNIT 1

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

As shown in Table 3.3-1

INSERT proposed Action A A.3

Action A

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

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 on a STAGGERED TEST BASIS at least once per 18 months. Neutron detectors are exempt from response time testing. Response of the neutron flux signal portion of the channel 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 L.20 A.1 LA.1 A.7 LA.1

A.1

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

ITS		FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other Specified Conditions	Conditions ACTION
1.	1.	Manual Reactor Trip	2	1	2	1, 2 A.1 PROPOSED Note a 3, 4 and 5	B A.1
			2	1	2		C L.1
2.	2.	Power Range, Neutron Flux High A.1	4	2	3	1, 2	D A.12 m.2
		LDW A.21	4	2	3	1, 2	E A.21
3a	3.	Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	E A.12 m.2
3b	4.	Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	E A.12 m.2
4	5.	Intermediate Range, Neutron Flux	2	1	2	1, 2 A.1 PROPOSED Note b A.10 PROPOSED Note c	F m.3 L.4
							G L.5
5	6.	Source Range, Neutron Flux					
		A. Startup	2	1	2	2 PROPOSED Note d LA.2	H m.4
						3, 4 and 5 A.1 PROPOSED Note a	I m.5
		B. Shutdown	2	1	2	3, 4 and 5	I m.5 J L.18
		C. Shutdown	2 (1) A.15	0	1	A.15 3, 4 and 5 PROPOSED note e	K m.6
6	7.	Overtemperature ΔT	3	2	2	1, 2	E A.12 A.17

A.5

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TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other Specified Condition	Condition ACTION	A.5
7	8. Overpower ΔT	3	2	2	1, 2	7	E — A.17
8a	9. Pressurizer Pressure – Low	3	2	2	1, 2 A.9 Proposed Note f	8	L — A.9
8b	10. Pressurizer Pressure – High	3	2	2	1, 2	8	E — A.17
9	11. Pressurizer Water Level – High	3	2	2	1, 2 A.9 Proposed Note f	8	L — A.9
10	12. Loss of Flow – (Above P-7)	3/loop	2/loop in any loop > P-8 2/loop in any 2 loops > P-7	2/loop in each loop	1 A.9 Proposed Note f	8	L — A.9
	13. Deleted						
14	14. Steam Generator Water Level – Low-Low	3/loop	2/loop	2/loop	1, 2	7	E — A.17
15	15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	2/loop-level and 2/loop-flow mismatch	1/loop-level coincident with 1/loop-flow mismatch in same loop	1/loop level and 2/loop-flow mismatch or 2/loop-level and 1/loop-flow mismatch	1, 2	7	E — A.17

A.12

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A.1

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other specified conditions	Condition ACTION
12	16. Undervoltage – Reactor Coolant Pump Busses	3 – 1/bus	2	2	Proposed Note f A.9	8 L A.9
13	17. Underfrequency – Reactor Coolant Pump Busses	3 – 1/bus	2	2	Proposed Note f A.9	8 L A.9
16	18. Turbine Trip					
16a	A. Low Auto Stop Oil Pressure	3	2	2	Proposed Note f A.9	9 N A.22
16b	B. Turbine Stop Valve Closure	4	4	3	Proposed Note f A.9	9 N A.22
17	19. Safety Injection Input from ESF	2	1	2	1, 2	16 O A.1
11	20. Reactor Coolant Pump Breaker Position Trip Above P-7	1/breaker	1 > P-8 2 > P-7	1/breaker	Proposed Note f A.9	9 M A.27
						A.12
19	21. A. Reactor Trip Breakers	2	1	2	1, 2	1 P L.13
		2	1	2	Proposed Note a L.1 3, 4, 5	15 C L.1
20 Note 25	RTB Undervoltage and Shunt Trip Mech.	1/RTB				A.19
	B. Reactor Trip Bypass Breakers	2	1	1	3(a), 4(a), 5(a) ***	5 C A.19 / 13 A.18
21	22. Automatic Trip Logic	2	1	2	1, 2	16 O A.1
		2	1	2	Proposed Note a L.1 3, 4, 5	15 C L.1

ITS 3.3.1

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A.1

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

A.5

ITS	FUNCTIONAL UNIT	Required ~~TOTAL NO OF CHANNELS~~	~~CHANNELS TO TRIP~~	~~MINIMUM CHANNELS OPERABLE~~	APPLICABLE MODES or other specified conditions	Condition ~~ACTION~~	
18	23. Reactor Trip System Interlocks						
18a	A. Intermediate Range Neutron Flux, P-6	2	1	2	Proposed Note 2 (A.1)	Q	A.16
18b	B. Low Power Reactor Trips Block, P-7	1/train (A.20)					
	P-10 Input	~~4~~	2	3	1	R (A.12)	A.16
	or						
	P-13 Input	~~2~~	1	2	1	R (A.12)	A.16
18c	C. Power Range Neutron Flux, P-8	4	2	3	1	R (A.12)	A.16
18d	D. Power Range Neutron Flux, P-10	4	2	3	1,2	Q (A.12)	A.16
18e	E. Turbine Impulse Chamber Pressure, P-13	2	1	2	1	R (A.12)	A.16

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A.1

TABLE 3.3-1 (Continued)

TABLE NOTATION

I.T.S

Note a

Note d

Note h

Note b
Note c
Note e
Note f
Note g

Action P

Action D
Action E

Note to Required Action D.2.2

Required Action: D.3 and E.2
Action E
Action G

* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal. or one or more rods not fully inserted — L.1

** Below the P-6 (Intermediate Range Neutron Flux) setpoint.

*** With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A). — A.18 — INSERT PROPOSED NOTE h

The provisions of Specification 3.0.4 are not applicable. — A.12

High voltage to detector may be de-energized above the P-6 setpoint. — LA.2

Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.

INSERT proposed Note c — A.1

INSERT proposed Note e — A.15

INSERT proposed Note f — A.9

INSERT proposed Note g — A.22

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE. — INSERT proposed Required Action P.1 — L.13

Note 1

Note 2 — One channel may be bypassed for up to 4 hours for concurrent surveillance testing of the reactor trip breaker and automatic trip logic, provided the other channel is OPERABLE.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of the redundant channel(s) per Specification 4.3.1.1.1.

Note

c. Either, THERMAL POWER is restricted to ≤ 75% of RATED THERMAL POWER and the Power Range Neutron Flux trip setpoint is reduced to ≤ 85% of RATED THERMAL POWER within 78 hours; or the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours. — L.2

INSERT PROPOSED Note to Required Action D.2.2 — L.3

d. The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the moveable incore detectors to confirm that the normalized symmetric power distribution, obtained from 2 sets of 4 symmetric thimble locations or a full-core flux map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours. — A.13

INSERT PROPOSED Required Actions D.3 and G.2 — M.2

ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

INSERT PROPOSED Action G — L.5

TABLE 3.3-1 (Continued)

Action F

a. Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint. — A.1

b. Above the P-6 setpoint, but below the P-10 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-10 setpoint. — Within 24 hours increase power above P-10 or decrease power below P-6 — L.4, M.3

c. Above the P-10 setpoint, POWER OPERATION may continue. — A.1

Action H

ACTION 4 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

Insert proposed required Action H.1 — M.4

a. Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.

b. Above the P-6 setpoint, operation may continue. — A.1

Action K

ACTION 5 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2, as applicable, within 1 hour and at least once per 12 hours thereafter.

Insert proposed required Action K.1 — M.6

ACTION 6 - Not applicable.

Action E

ACTION 7 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

NOTE b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, place the unit in HOT STANDBY in 6 hours, HOT SHUTDOWN within the next 6 hours and COLD SHUTDOWN in the following 30 hours. — A.17

Actions L and M

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied: — A.27

Note a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, reduce power to less than the P-7 setpoint in 6 hours.

Action I

Insert proposed Action I — M.5

ITS

TABLE 3.3-1 (Continued)

Action N

ACTION 9 - With the number of channels OPERABLE less than the Total Number of Channels OPERABLE requirement, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 72 hours and the Minimum Channels OPERABLE requirement is met. or reduce power to less than the P-8 setpoint in the next 4 hours.

ACTION 10 - Deleted

ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour. A.8

Action B

ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.

ACTION 13 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within (1) hour or terminate testing of the Reactor Trip Breaker and open the Reactor Trip Bypass Breaker. A.18

Action S Note 2 Action P

ACTION 14 - With one of the diverse trip features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply Action 1. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status. Insert Required Actions A.19 A.26

Actions C and J

ACTION 15 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour. L.1

Insert Proposed Required Action C.2

Insert proposed Required Action J.2

Action O

ACTION 16 - With the number of channels OPERABLE one less that required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE. L.18

Note

Actions Q and R

ACTION 17 - With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant conditions or apply Specification 3.0.3. LA.6

Insert proposed Required Actions Q.2 and R.2 A.16

A.1

TABLE 3.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INTERLOCKS

ITS	DESIGNATION	CONDITION	SETPOINT	ALLOWABLE VALUES	FUNCTION
19	P-6	1 of 2 Intermediate range above setpoint (increasing power level)	1×10^{-10}	$< 3 \times 10^{-10}$ L.14	Allows manual block of source range reactor trip
		2 of 2 Intermediate range below setpoint (decreasing power level)	5×10^{-11}	$\geq 3 \times 10^{-11}$	Defeats the block of source range reactor trip
18d	P-10	2 of 4 Power range above setpoint (increasing power level)	10%	$\leq$ 11%	Allows manual block of power range (low setpoint) and intermediate range reactor trips and intermediate range rod stop. Blocks source range reactor trip.
		3 of 4 Power range below setpoint (decreasing power level)	8%	$\geq$ 7% L.8	Defeats the block of power range (low setpoint) and intermediate range reactor trips and intermediate range rod stop.
18b	P-7 (P-10 A.1)	2 of 4 Power range above setpoint	10%	$\leq$ 11% LA.11	Input to P-7.
		or			Allows reactor trip when any of the following occur in more than one loop: low flow, reactor coolant pump breaker open, undervoltage (RCP busses) or underfrequency (RCP busses). Also allows reactor trip on: pressurizer low pressure or pressurizer high level.
18c	P-13	1 of 2 Turbine Impulse chamber pressure above setpoint	Pressure equivalent to 10% rated turbine power	$\leq$ 11% LA.3	
		(Power level increasing)			LA.3

LA.3

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TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INTERLOCKS

DESIGNATION	CONDITION	SETPOINT	ALLOWABLE VALUES	FUNCTION
P-7 (Cont'd)	3 of 4 Power range below setpoint and	8%	7%	Prevents reactor trip when any of the following occur: low flow, reactor coolant pump breakers open, undervoltage (RCP busses), underfrequency (RCP busses), pressurizer low pressure or pressurizer high level.
	2 of 2 Turbine Impulse chamber pressure below setpoint	8%	>7%	
	(Power level decreasing)			
P-8	2 of 4 Power range above setpoint (Power level increasing)	30%	31%	Allows reactor trip when any of the following occur: low flow in a single loop, a single reactor coolant pump breaker open, or a turbine trip.
	3 of 4 Power range below setpoint (Power level decreasing)	28%	>27%	Prevents reactor trip when any of the following occur: low flow in a single loop, a single reactor coolant pump breaker open, or a turbine trip.

A.1

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (A.11)	COT (A.10 or T)	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test (A.7)
1	1. Manual Reactor Trip	N.A.	N.A.			1, 2 and *	N/A — L.20
2	2. Power Range, Neutron Flux						
2a	A. High Setpoint					1, 2	3.3.1.16
2b	B. Low Setpoint					1***, 2	3.3.1.16
3a	3. Power Range, Neutron Flux, High Positive Rate	N.A.				1, 2	N/A — L.20
3b	4. Power Range, Neutron Flux, High Negative Rate	N.A.				1, 2	3.3.1.16
4	5. Intermediate Range, Neutron Flux					1***, 2	N/A — L.20
5	6. Source Range, Neutron Flux	a.				3*, 4*, 5*	
6	7. Overtemperature ΔT	b.	N.A.	N.A.		2, 3, 4, 5	3.3.1.16
7	8. Overpower ΔT					1, 2	3.3.1.16
8a	9. Pressurizer Pressure – Low					1, 2	N/A — L.20
8b	10. Pressurizer Pressure – High					1, 2	3.3.1.16
9	11. Pressurizer Water Level – High					1, 2	3.3.1.16
10	12. Loss of Flow					1	3.3.1.16

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TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (A.11: COT, TADOT)	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test (A.5)
	13. Deleted					—
14	14. Steam Generator Water Level – Low-Low	R (A.1) 3.3.1.1	R (A.1) 3.3.1.10	R (A.11) 3.3.1.7	1, 2	3.3.1.16 (A.7)
15	15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	R (A.1) 3.3.1.1	R (A.1) 3.3.1.10	R (A.11) 3.3.1.7	1, 2	N/A (L.20)
12	16. Undervoltage – Reactor Coolant Pump Busses	N.A.	R (A.1) 3.3.1.10	N.A. 3.3.1.9 (M.1)	1	3.3.1.16
13	17. Underfrequency – Reactor Coolant Pump Busses	N.A.	R (A.1) 3.3.1.10	N.A.	1	3.3.1.16
16	18. Turbine Trip					
16a	A. Low Auto Stop Oil Pressure	N.A.	NA (M.7) 3.3.1.10	S/U(1) (A.25) 3.3.1.15	1, 2	N/A
16b	B. Turbine Stop Valve Closure	N.A.	NA (M.7) 3.3.1.10	S/U(1) (A.25) 3.3.1.15	1, 2	N/A (L.20)
17	19. Safety Injection Input from ESF	N.A.	N.A.	M(4) & R (A.23) A.14 3.3.1.14	1, 2	N/A
11	20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R (A.11) 3.3.1.14	N.A.	N/A
19	21. A. Reactor Trip Breaker	N.A.	N.A.	A.11 3.3.1.4; M(5) (9) (A.23); R (A.11)	1, 2, & *	N/A
	B. Reactor Trip Bypass Breaker	N.A.	N.A.	M(5) (9), & R(10) (A.18)	1, 2, & *	N/A
20	RTB Undervoltage and Shunt Trip Mech	N/A	NA	3.3.1.4 (A.19)	1, 2, & *	N/A
21	22. Automatic Trip Logic	N.A.	N.A.	A.11 M(5) (9) 3.3.1.5 A.23	1, 2, & *	

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TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (A.11) (COT TADOT)	MODES IN WHICH SURVEILLANCE REQUIRED (A.5)
18	23. Reactor Trip System Interlocks				
18a	A. Intermediate Range Neutron Flux, P-6	N.A.	3.3.1.11 R(11) A.1	3.3.1.13 R A.11	$2^{(7)}$
18b	B. Low Power Reactor Trips Block, P-7	N.A.	3.3.1.11 R(11) A.1	3.3.1.13 R A.11	1
18c	C. Power Range Neutron Flux, P-8	N.A.	3.3.1.11 R(11) A.1	3.3.1.13 R A.11	1
18d	D. Power Range Neutron Flux, P-10	N.A.	3.3.1.11 R(11) A.1	3.3.1.13 R A.11	1, 2
18e	E. Turbine Impulse Chamber Pressure, P-13	N.A.	3.3.1.11 R A.1	3.3.1.13 R A.11	1

ITS

TABLE 4.3-1 (Continued)

NOTATION

* – With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal. A.5

*** – Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint A.5

Note SR3.3.1.8 SR3.3.1.15 Note SR3.3.1.2 Note SR 3.3.1.3

(1) – If not performed in previous 31 days. (92 day for SR 3.3.1.7 and SR 3.3.1.8) L.11 A.25

(2) – Heat balance only, above 15% of RATED THERMAL POWER. <INSERT PROPOSED NOTE> L.15

(3) – Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Adjust channel if absolute difference ≥ 3 percent. <INSERT PROPOSED NOTE> L.9

Note SR 3.3.1.14

(4) – Manual ESF functional input check every 18 months. A.14

FREQUENCY SR 3.3.1.4 SR3.3.1.5 Note SR3.3.1.11

(5) – Each train or logic channel shall be tested at least every 62 (31) days on a STAGGERED TEST BASIS. A.23

(6) – Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) – Below the P-6 (Intermediate Range Neutron Flux Interlock) setpoint A.5

TADOT

(8) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s). A.11 LA.4

(9) – Local manual shunt trip the reactor trip bypass breaker immediately after placing the bypass breaker into service, but prior to commencing reactor trip system testing or reactor trip breaker maintenance. LA.12

(10) – Automatic undervoltage trip LA.4

TADOT

(11) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers. A.11 LA.4

SR3.3.1.8 Note SR3.3.1.8

(12) – Quarterly Surveillance in Modes 3*, 4* and 5* shall also include verification that Permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window. L.10 LA.6

(13) – Detector plateau curves shall be obtained and evaluated. The provisions of Specification 4.0.4 are not applicable for entry into Mode 2 or 1. LA.13 M.8

(A.1)

ITS 3.3.1

11-26-77

SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

(A.1)

2.2 LIMITING SAFETY SYSTEM SETTINGS

REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS

2.2.1 The reactor trip system instrumentation setpoints shall be set consistent with the Trip Setpoint values shown in Table 2.2-1.

(LA.11)

APPLICABILITY: As shown for each channel in Table 3.3-1.

ACTION:

With a reactor trip system instrumentation setpoint less conservative than the value shown in the Allowable Values column of Table 2.2-1, declare the channel inoperable and apply the applicable ACTION statement requirement of Specification 3.3.1.1 until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

(LA.7)

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TABLE 2.2-1

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

ALLOWABLE Values

LA.11

ITS		FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
1	1.	Manual Reactor Trip	Not Applicable	Not Applicable
2b	2.	Power Range, Neutron Flux	Low Setpoint - ≤ 25% of RATED THERMAL POWER	Low Setpoint - ≤ 26% of RATED THERMAL POWER
2a			High Setpoint - ≤ 109%** of RATED THERMAL POWER	High Setpoint - ≤ 110%*** of RATED THERMAL POWER (A.6)
3a	3.	Power Range, Neutron Flux, High Positive Rate	≤ 5% of RATED THERMAL POWER with a time constant ≥ 2 seconds	≤ 5.5% of RATED THERMAL POWER with a time constant ≥ 2 seconds
3b	4.	Power Range, Neutron Flux, High Negative Rate	≤ 5% of RATED THERMAL POWER with a time constant ≥ 2 seconds	≤ 5.5% of RATED THERMAL POWER with a time constant ≥ 2 seconds
4	5.	Intermediate Range, Neutron Flux	≤ 35% of RATED THERMAL POWER	≤ 40% of RATED THERMAL POWER
5	6.	Source Range, Neutron Flux	≤ 10^5 counts per second	≤ 1.3 x 10^5 counts per second
6	7.	Overtemperature ΔT	See Note 1	See Note 3 (Note 1)
7	8.	Overpower ΔT	See Note 2	See Note 3 (Note 2) LA.11
8a	9.	Pressurizer Pressure – Low	≥ 1870 psig	≥ 1860 psig
8b	10.	Pressurizer Pressure – High	≤ 2360 psig	≤ 2370 psig
9	11.	Pressurizer Water Level – High	≤ 92% of instrument span	≤ 93% of instrument span
10	12.	Loss of Flow	≥ 90% of design flow per loop*	≥ 89% of design flow per loop* LA.8

* Design flow per loop is one-third of the minimum allowable Reactor Coolant System Total Flow Rate as specified in Table 3.2-1. LA.8

** The high trip setpoint for Power Range, Neutron Flux, shall be ≤ 103% RATED THERMAL POWER for the period of operation until steam generator replacement.

*** The allowable value for the high trip setpoint for Power Range, Neutron Flux, is required to be ≤ 104% RATED THERMAL POWER for the period of operation until steam generator replacement. A.6

A.1

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION (Allowable Values / TRIP SETPOINTS)

ITS	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
14	13. Steam Generator Water Level--Low-Low	≥ 18% of narrow range instrument span-each steam generator	≥ 17% of narrow range instrument span-each steam generator (LA.10)
15	14. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	≤ 40% of full steam flow at RATED THERMAL POWER coincident with steam generator water level ≥ 25% of narrow range instrument span--each steam generator	≤ 42.5% of full steam flow at RATED THERMAL POWER coincident with steam generator water level ≥ 24% of narrow range instrument span--each steam generator (LA.10)
12	15. Undervoltage-Reactor Coolant Pump Busses	≥ 2905 volts-each bus	≥ 2870 volts-each bus
13	16. Underfrequency-Reactor Coolant Pump Busses	≥ 56.1 Hz - each bus	≥ 56.0 Hz - each bus
16	17. Turbine Trip A. Low Trip System Pressure B. Turbine Stop Valve Closure	≥ 45 psig ≥ 1% open	≥ 40 psig ≥ 0% open
17	18. Safety Injection Input from ESF	Not Applicable	Not Applicable
11	19. Reactor Coolant Pump Breaker Position Trip	Not Applicable (LA.11)	Not Applicable

LA.11

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A.1

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION (ALLOWABLE VALUES / TRIP SETPOINTS)

LA.11

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NOTATION

NOTE 1: Overtemperature $\Delta T \leq \Delta T_0 \{K_1 - K_2 \left[\frac{1+\tau_1 S}{1+\tau_2 S}\right](T - T') + K_3(P - P') - f_1(\Delta I)\}$

where:

ΔT_0 = Indicated ΔT at RATED THERMAL POWER

T = Average temperature, ^{o}F

T' = Indicated T_{avg} at RATED THERMAL POWER $\leq$ (*) 586.8 ^{o}F LA.5

P = Pressurizer pressure, psig

P' (*) 2235 (≥) psig (indicated RCS nominal operating pressure) LA.5 L.19

$\frac{1+\tau_1 S}{1+\tau_2 S}$ = The function generated by the lead-lag controller for T_{avg} dynamic compensation

τ_1 & τ_2 = Time constants utilized in the lead-lag controller for T_{avg} τ_1 = (*) 25 (≥) secs., τ_2 (*) 5 (≤) secs. LA.5 L.19

S = Laplace transform operator (sec^{-1})

The values denoted by * are specified in the COLR. LA.5

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A.1

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TABLE 2.2-1 (Continued) ALLOWABLE VALUES
REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS
NOTATION (Continued)

LA.11

Operation with 3 Loops

K_1	1.264	*
K_2	0.0220	/
K_3	0.001152	/

*

Operation with 2 Loops (no loops isolated)

$K_1 = (\quad)$
$K_2 = (\quad)$
$K_3 = (\quad)$

Operation with 2 Loops (1 loop isolated)*

$K_1 = (\quad)$
$K_2 = (\quad)$
$K_3 = (\quad)$

A.6

LA.5

L.19

and $f_1(\Delta I)$ is a function of the indicated difference between top and bottom detectors of the power-range nuclear ion chambers; ~~with gains to be selected based on measured instrument response during plant start-up tests such that:~~

A.24

LA.5

(I) for $q_t - q_b$ between -44 percent and +8 percent, $f_1(\Delta I) = 0$ (where q_t and q_b are percent RATED THERMAL POWER in the top and bottom halves of the core respectively, and $q_t + q_b$ is total THERMAL POWER in percent of RATED THERMAL POWER).

(II) for each percent that the magnitude of $(q_t - q_b)$ exceeds -44 percent, the ΔT trip setpoint shall be automatically reduced by 1.67 percent of its value at RATED THERMAL POWER.

LA.5

(III) for each percent that the magnitude of $(q_t - q_b)$ exceeds +3 percent, the ΔT trip setpoint shall be automatically reduced by 2.00 percent of its value at RATED THERMAL POWER.

LA.5

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* Values dependent on NRC approval of ECCS evaluation for these operating conditions.
** The value for K_1 shall be equal to 1.132 for the period of operation until steam generator replacement.

The values denoted by * are specified in the COLR.

A.6

LA.5

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A.1

TABLE 2.2-1 (Continued) ALLOWABLE Values
REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS
NOTATION (Continued)

LA.11

Note 2: Overpower $\Delta T \leq \Delta T_o \left[K_4 - K_5 \left(\frac{\tau_3 S}{1+\tau_3 S} \right) T - K_6 (T - T') - f_2(\Delta I) \right]$

Where:

- ΔT_o = Indicated ΔT at RATED THERMAL POWER
- T = Average temperature, °F
- T' = Indicated T_{avg} at RATED THERMAL POWER ≤ 586.8°F — A.6
- K_4 = ≤ * 1.075 — A.6
- K_5 = * 0.02/°F for increasing average temperature — LA.5
- K_5 = 0 for decreasing average temperatures — L.19
- K_6 = 0.00164 for $T > T'$; K_6 = 0 for $T \leq T'$ — LA.5
- $\frac{\tau_3 S}{1+\tau_3 S}$ = The function generated by the rate lag controller for T_{avg} dynamic compensation — LA.9
- τ_3 = Time constant utilized in the rate lag controller for T_{avg} — L.19
  τ_3 ≥ * 10 secs. — LA.5
- S = Laplace transform operator (sec^{-1}) — LA.5
- $f_2(\Delta I)$ = 0 for all ΔI — LA.5

Note 3: The channel's maximum trip point shall not exceed its computed trip point by more than 2 percent span (for Overpower ΔT) — A.1
2.3 percent Span for Overtemperature ΔT — L.21

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* The value for K_4 shall be equal to 1.016 for the period of operation until steam generator replacement. — A.6

The values denoted by * are specified in the COLR — LA.5

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A.1

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3/4.3 INSTRUMENTATION

3.3.1 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:

Actions A

As shown in Table 3.3-1.

INSERT Proposed Note A.2

INSERT Proposed Actions 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

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 on a STAGGERED TEST BASIS. 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 L.20 A.1 LA.1 A.7 LA.1

(A.1)

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	(Required) ~~TOTAL NO. OF~~ CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES (or other specified conditions)	(Condition) ~~ACTION~~ (A.5)
1	1. Manual Reactor Trip	2	1	2	1, 2 (A.1)	~~12~~ B — (A.1)
		2	1	2	(Proposed Note a) 3*, 4* and 5*	~~13~~ C — (L.1)
2	2. Power Range, Neutron Flux (High) (A.21)	4	2	3	1, 2	~~2~~ D (A.12) (M.2)
	(Low)	4			1(b), 2	E (A.21)
3a	3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	~~2~~ E (A.12) (M.2)
3b	4. Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	~~2~~ E (A.12) (M.2)
4	5. Intermediate Range, Neutron Flux	2	1	2	(Proposed Note b) (A.1) 1###, 2 (A.10) (Proposed Note c)	~~3~~ F, G (L.4) (M.3) (L.5)
5	6. Source Range, Neutron Flux					
	A. Startup	2	1	2	(Proposed Note d) (LA.2) 2## (A.1)	~~4~~ H, I (M.4) (M.5)
	B. Shutdown	2	1	2	(Proposed Note a) 3*, 4* and 5* (A.15)	~~15~~ I, J (M.5) (L.18)
	C. Shutdown	~~2~~ 1 (A.15)	0	1	(Proposed Note e) 3, 4 and 5	~~8~~ K (M.6)
6	7. Overtemperature ΔT	3	2	2	1, 2	~~11~~ E (A.12) (A.17)

A.1

TABLE 3.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	or other Specified Conditions APPLICABLE MODES	Condition ACTION	A.5
7	8. Overpower ΔT	3	2	2	1, 2	7	E A.17
8a	9. Pressurizer Pressure – Low	3	2	2	Proposed Note f 1, 2 A.9	8	L A.9
8b	10. Pressurizer Pressure – High	3	2	2	1, 2	7	E A.17
9	11. Pressurizer Water Level – High	3	2	2	Proposed Note f 1, 2 A.9	8	L A.9
10	12. Loss of Flow – (Above P-7)	3/loop	2/loop in any loop > P-8 2/loop in any 2 loops > P-7	2/loop in each loop	1 A.9 Proposed Note f	8	L A.9
	13. Deleted						
14	14. Steam Generator Water Level – Low-Low	3/loop	2/loop	2/loop	1, 2	7	E A.17
15	15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	2/loop-level and 2/loop-flow mismatch	1/loop-level coincident with 1/loop-flow mismatch in same loop	1/loop level and 2/loop-flow mismatch or 2/loop-level and 1/loop-flow mismatch	1, 2	7	E A.17
						A.12	

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TABLE 3.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other specified Conditions	Condition ACTION
12	16. Undervoltage–Reactor Coolant Pump Busses	3–1/bus	2	2	Proposed Note f A.9	8 L A.9
13	17. Underfrequency–Reactor Coolant Pump Busses	3–1/bus	2	2	Proposed Note f A.9	8 L A.9
16	18. Turbine Trip					
16a	A. Low Auto Stop Oil Pressure	3	2	2	Proposed Note f 1 A.9	8 N A.22
16b	B. Turbine Stop Valve Closure	4	4	3	Proposed Note f A.9	8 N A.22
17	19. Safety Injection Input from ESF	2	1	2	1, 2	14 O A.1
11	20. Reactor Coolant Pump Breaker Position Trip Above P-7	1/breaker	1 > P-8 2 > P-7	1/breaker	Proposed Note f A.9	8 M A.22
						A.12
19	21. A. Reactor Trip Breakers	2	1	2	1, 2	P L.13
		2	1	2	Proposed Note a 3(a), 4(a), 5(a) L.1	K A.19
20	RTB Undervoltage and Shunt Trip Mech.	1/RTB A.19				C L.1
	B. Reactor Trip Bypass Breakers	2 A.18	1	1	***	13 A.18
21	22. Automatic Trip logic	2	1	2	1, 2	14 O A.1
		2	1	2	Proposed Note a 3(a), 4(a), 5(a) L.1	15 C L.1

A.5

ITS 3.3.1

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A.1

TABLE 3.3-1 (CONTINUED)
REACTOR TRIP SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES (or other specified conditions)	ACTION (Condition)	
18	23. Reactor Trip System Interlocks						
18a	A. Intermediate Range Neutron Flux, P-6	2	1	2	2 (Proposed Note d) A.1	[illegible]	Q A.16
18b	B. Low Power Reactor Trips Block, P-7	1/train A.20					
	P-10 Input	4	2	3	1	[illegible]	R A.16
	or						
	P-13 Input	2	1	2	1	[illegible]	R A.16
18c	C. Power Range Neutron Flux, P-8	4	2	3	1	[illegible]	R A.16
18d	D. Power Range Neutron Flux, P-10	4	2	3	1, 2	[illegible]	Q A.16
18e	E. Turbine Impulse Chamber Pressure, P-13	2	1	2	1	[illegible]	R A.16

A.12

A.5

TABLE 3.3-1(CONTINUED)

TABLE NOTATION

ITS

Note a

* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal. (or one or more rods not fully inserted) — L.1

Note d

** Below the P-6 (Intermediate Range Neutron Flux) setpoint.

Note h

*** With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A). (INSERT PROPOSED Note h) — A.18

\# The provisions of Specification 3.0.4 are not applicable. — A.12

\## High voltage to detector may be de-energized above the P-6 setpoint. — LA.2

Note b

\### Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.

Note c — (Insert proposed Note C) — A.1

Note e — ACTION STATEMENTS — (INSERT proposed Note E) — A.15

Note f — (INSERT PROPOSED Note f) — (INSERT PROPOSED Note g) — A.9 — A.22

Note g

Action P

ACTION 1 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE.

Note 1

Note 2 — One channel may be bypassed for up to 4 hours for concurrent surveillance testing of the reactor trip breaker and automatic trip logic, provided the other channel is OPERABLE.

(INSERT Proposed Required Action P.1) — L.13

Action D

Action E

ACTION 2 – With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of the redundant channel(s) per Specification 4.3.1.1.1.

Note

c. Either, THERMAL POWER is restricted to ≤ 75% of RATED THERMAL POWER and the Power Range Neutron Flux trip setpoint is reduced to ≤ 85% of RATED THERMAL POWER within 78 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours. — L.2

Note to Required Action D.2.2 — (INSERT PROPOSED Note to REQUIRED ACTION D.2.2) — L.3

d. The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the movable incore detectors to confirm that the normalized symmetric power distribution, obtained from 2 sets of 4 symmetric thimble locations or a full-core flux map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours. — A.13

Required Actions D.3 and E.2 — (INSERT PROPOSED REQUIRED ACTIONS D.3 and E.2) — M.2

Action G — (INSERT proposed ACTION G) — L.5

ITS

TABLE 3.3-1 (CONTINUED)

Action F

ACTION 3 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. ~~Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing~~ THERMAL POWER above the P-6 setpoint. (A.1)

b. Above the P-6 setpoint, but below the P-10 setpoint, restore the inoperable channel to OPERABLE status ~~prior to increasing THERMAL POWER above the P-10 setpoint.~~ within 24 hours increase power above P-10 or decrease power below P-6 (L.4, M.3)

c. ~~Above the P-10 setpoint, POWER OPERATION may continue.~~ (A.1)

Action H

ACTION 4 – ~~With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:~~

INSERT PROPOSED Required Action H.1 (M.4)

a. ~~Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.~~

b. ~~Above the P-6 setpoint, operation may continue.~~ (A.1)

Action K

ACTION 5 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2, as applicable, within 1 hour and at least once per 12 hours thereafter.

INSERT PROPOSED Required Action K.1 (M.6)

ACTION 6 – Not applicable.

Action E

ACTION 7 – With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

Note

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, place the unit in HOT STANDBY in 6 hours, ~~HOT SHUTDOWN within the next 6 hours and~~ COLD SHUTDOWN in the following 30 hours. (A.17)

Actions L and M

ACTION 8 – With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied: (A.27)

a. The inoperable channel is placed in the tripped condition within 72 hours.

Note

Action I

INSERT PROPOSED Action I (M.5)

ITS

TABLE 3.3-1(CONTINUED)

Action L and M

Note to Action

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, reduce power to less than the P-7 setpoint in 6 hours.

Action N

ACTION 9 – With the number of channels OPERABLE less than the Total Number of Channels OPERABLE requirement, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 72 hours and the Minimum Channels OPERABLE Requirement is met, or reduce power to less than the P-8 setpoint in the next 4 hours.

ACTION 10 – Deleted

ACTION 11 – With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour. A.8

Action B

ACTION 12 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.

ACTION 13 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within (1) hour or terminate testing of the Reactor Trip Breaker and open the Reactor Trip Bypass Breaker. A.18

Action S Note 2 Action P

ACTION 14 – With one of the diverse trip features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply Action 1. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status. INSERT Required Action S.2 A.19 A.26

Actions C and J

ACTION 15 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour. L.1 INSERT proposed Required Action C.2 INSERT proposed Required Action J.2 L.18

Action O

ACTION 16 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. Note: however one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

Actions Q and R

ACTION 17 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant conditions or apply Specification 3.0.3. LA.6 INSERT PROPOSED Required Actions Q.2 and R.2 A.16

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INTERLOCKS

DESIGNATION	CONDITION	SETPOINT	ALLOWABLE VALUES	FUNCTION
P-6	1 of 2 Intermediate range above setpoint (increasing power level)	1×10^{-10}	$< 3 \times 10^{-10}$	Allows manual block of source range reactor trip
	2 of 2 Intermediate range below setpoint (decreasing power level)	5×10^{-11}	$\geq 3 \times 10^{-11}$	Defeats the block of source range reactor trip
P-10	2 of 4 Power range above setpoint (increasing power level)	10%	≤ 11%	Allows manual block of power range (low setpoint) and intermediate range reactor trips and intermediate range rod stop. Blocks source range reactor trip.
	3 of 4 Power range below setpoint (decreasing power level)	8%	≥ 7%	Defeats the block of power range (low setpoint) and intermediate range reactor trips and intermediate range rod stop.
				Input to P-7.
P-7	2 of 4 Power range above setpoint	10%	≤ 11%	Allows reactor trip when any of the following occur in more than one loop: low flow, reactor coolant pump breaker open, undervoltage (RCP busses) or underfrequency (RCP busses). Also allows reactor trip on: pressurizer low pressure or pressurizer high level.
	or			
	1 of 2 Turbine Impulse chamber pressure above setpoint (Power level increasing)	Pressure equivalent to 10% rated turbine power	≤ 11%	

A.1

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INTERLOCKS

ITS	DESIGNATION	CONDITION	SETPOINT	ALLOWABLE VALUES	FUNCTION
18b	P-7 (Cont'd) (P-10) (A.1) (P-13)	3 of 4 Power range below setpoint and 2 of 2 Turbine Impulse chamber pressure below setpoint (Power level decreasing)	8% / 8%	≥7% (L.8) / >7% (L.14)	Prevents reactor trip when any of the following occur: low flow, reactor coolant pump breakers open, undervoltage (RCP busses), underfrequency (RCP busses), pressurizer low pressure or pressurizer high level.
18c	P-8	2 of 4 Power range above setpoint (Power level increasing)	30%	≤31% (L.8)	Allows reactor trip when any of the following occur: low flow in a single loop, a single reactor coolant pump breaker open, or a turbine trip.
		3 of 4 Power range below setpoint (Power level decreasing)	28%	>27% (L.14)	Prevents reactor trip when any of the following occur: low flow in a single loop, a single reactor coolant pump breaker open, or a turbine trip.
		LA.3	LA.11		LA.3

ITS 3.3.1

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4.1

PAGES 3/4 3-10 AND 3/4 3-11 ARE DELETED

(The next Page is 3/4 3-12)

A.1

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TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	[illegible]	1, 2 and *
2. Power Range, Neutron Flux				
A. High Setpoint	S	D(2, 4), M(3, 6) and R(4)	Q	1, 2
B. Low Setpoint	S	R(4)	S/U(1)	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4)	Q	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4)	Q	1, 2
5. Intermediate Range, Neutron Flux	a. S b. [illegible]	R(4, 13) N.A.	S/U(11), Q(12) N.A.	1***, 2 3*, 4*, 5*
6. Source Range, Neutron Flux	S	R(4)	S/U(1), Q(12)	2, 3, 4, 5
7. Overtemperature ΔT	S	R(4)	Q	1, 2
8. Overpower ΔT	S	R(4)	Q	1, 2
9. Pressurizer Pressure – Low	S	R	Q	1, 2
10 Pressurizer Pressure – High	S	R	Q	1, 2
11. Pressurizer Water Level – High	S	R	Q	1, 2
12. Loss of Flow	S	R	Q	1

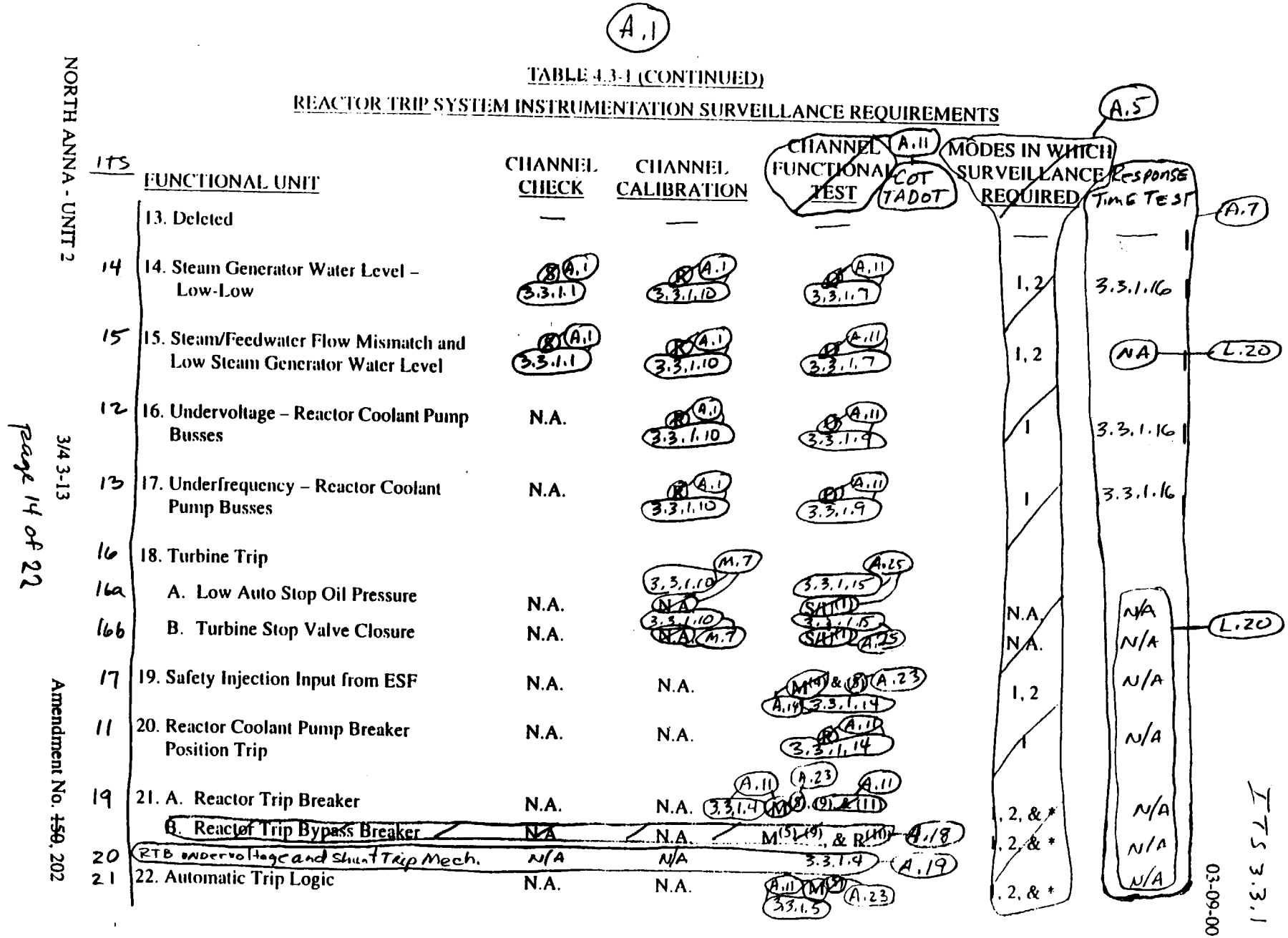

TABLE 4.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (COT / TADOT)	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test
	13. Deleted	—	—	—	—	—
14	14. Steam Generator Water Level – Low-Low	S A.1 3.3.1.1	R A.1 3.3.1.10	M A.11 3.3.1.7	1, 2	3.3.1.16
15	15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	S A.1 3.3.1.1	R A.1 3.3.1.10	M A.11 3.3.1.7	1, 2	NA L.20
12	16. Undervoltage – Reactor Coolant Pump Busses	N.A.	R A.1 3.3.1.10	M A.11 3.3.1.9	1	3.3.1.16
13	17. Underfrequency – Reactor Coolant Pump Busses	N.A.	R A.1 3.3.1.10	M A.11 3.3.1.9	1	3.3.1.16
16	18. Turbine Trip					
16a	A. Low Auto Stop Oil Pressure	N.A.	M.7 3.3.1.10	A.25 3.3.1.15 SU(11)	N.A.	N/A L.20
16b	B. Turbine Stop Valve Closure	N.A.	NA 3.3.1.10 NA M.7	3.3.1.15 SU(11) A.25	N.A.	N/A
17	19. Safety Injection Input from ESF	N.A.	N.A.	M(4) & (5) A.23 A.14 3.3.1.14	1, 2	N/A
11	20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R A.11 3.3.1.14	1	N/A
19	21. A. Reactor Trip Breaker	N.A.	N.A.	A.11 3.3.1.4 A.23 M(5)(9) A.11	1, 2, & *	N/A
	B. Reactor Trip Bypass Breaker	N.A.	N.A.	M(5)(9), & R(11) A.18	1, 2, & *	N/A
20	RTB undervoltage and Shunt Trip Mech.	N/A	N/A	3.3.1.4 A.19		
21	22. Automatic Trip Logic	N.A.	N.A.	A.11 M(5) A.23 3.3.1.5	1, 2, & *	N/A

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TABLE 4.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (A.11; COT; TADOT)	MODES IN WHICH SURVEILLANCE REQUIRED (A.5)
18	23. Reactor Trip System Interlocks				
18a	A. Intermediate Range Neutron Flux, P-6	N.A.	3.3.1.11 R(M) A.1	3.3.1.13 R A.11	2(7)
18b	B. Low Power Reactor Trips Block, P-7	N.A.	3.3.1.11 R A.1	3.3.1.13 R A.11	1
18c	C. Power Range Neutron Flux, P-8	N.A.	3.3.1.11 R(M) A.1	3.3.1.13 R A.11	1
18d	D. Power Range Neutron Flux, P-10	N.A.	3.3.1.11 R(M) A.1	3.3.1.13 R A.11	1, 2
18e	E. Turbine Impulse Chamber Pressure, P-13	N.A.	3.3.1.11 R A.1	3.3.1.13 R A.11	1

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TABLE 4.3-1 (CONTINUED)

ITS | NOTATION

* – With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal. (A.5)

*** – Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint. (A.5)

Note SR 3.3.1.8 SR 3.3.1.15 | (1) – If not performed in previous 31 days. (92 days for SR 3.3.1.7 and SR 3.3.1.8) (L.11) (A.25)

Note SR 3.3.1.2 | (2) – Heat balance only, above 15% of RATED THERMAL POWER. Adjust channel if absolute difference ≥2 percent. <INSERT PROPOSED NOTE> (L.7) (L.15)

Note SR 3.3.1.3 | (3) – Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Recalibrate if absolute difference ≥ 3 percent. <INSERT PROPOSED NOTE> (L.9)

Note SR 3.3.1.14 | (4) – Manual ESF functional input check every 18 months. (A.14)

FREQUENCY SR 3.3.1.4 SR 3.3.1.5 | (5) – Each train or logic channel shall be tested at least every 62 (31) days on a STAGGERED TEST BASIS. (A.23)

NOTE SR 3.3.1.11 | (6) – Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) – Below the P-6 (Intermediate Range Neutron Flux Interlock) setpoint. (A.5)

TADOT | (8) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s). (A.11) (LA.4)

(9) – Local manual shunt trip the reactor trip bypass breaker immediately after placing the bypass breaker into service, but prior to commencing reactor trip system testing or reactor trip breaker maintenance. (LA.12)

(10) – Automatic undervoltage trip. (LA.4)

TADOT | (11) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers. (A.11) (LA.4)

SR 3.3.1.8 NOTE SR 3.3.1.8 | (12) – Quarterly Surveillance in Modes 3*, 4* and 5* shall also include verification that Permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window. (L.10) (LA.6)

(13) – Detector plateau curves shall be obtained and evaluated. The provisions of Specification 4.0.4 are not applicable for entry into Mode 2 or 1. (LA.13) (M.8)

A.1

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SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

2.2 LIMITING SAFETY SYSTEM SETTINGS

A.1

REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS

2.2.1 The reactor trip system instrumentation setpoints shall be set consistent with the Trip Setpoint values shown in Table 2.2-1.

LA.11

APPLICABILITY: As shown for each channel in Table 3.3-1.

ACTION:

With a reactor trip system instrumentation setpoint less conservative than the value shown in the Allowable Values column of Table 2.2-1, declare the channel inoperable and apply the applicable ACTION statement requirement of Specification 3.3.1.1 until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

LA.7

A.1

TABLE 2.2-1

REACTOR TRIP SYSTEM INSTRUMENTATION ALLOWABLE Values TRIP SETPOINTS

LA.11

ITS		FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
1	1.	Manual Reactor Trip	Not Applicable	Not Applicable
2a	2.	Power Range, Neutron Flux	Low Setpoint - ≤ 25% of RATED THERMAL POWER	Low Setpoint - ≤ 26% of RATED THERMAL POWER
2b			High Setpoint - ≤ 109% of RATED THERMAL POWER	High Setpoint - ≤ 110% of RATED THERMAL POWER
3a	3.	Power Range, Neutron Flux, High Positive Rate	≤ 5% of RATED THERMAL POWER with a time constant ≥ 2 seconds	≤ 5.5% of RATED THERMAL POWER with a time constant ≥ 2 seconds
3b	4.	Power Range, Neutron Flux, High Negative Rate	≤ 5% of RATED THERMAL POWER with a time constant ≥ 2 seconds	≤ 5.5% of RATED THERMAL POWER with a time constant ≥ 2 seconds
4	5.	Intermediate Range, Neutron Flux	≤ 35% of RATED THERMAL POWER	≤ 40% of RATED THERMAL POWER
5	6.	Source Range, Neutron Flux	≤ 10^5 counts per second	≤ 1.3×10^5 counts per second
6	7.	Overtemperature ΔT	See Note 1	See Note 3 (Note 1)
7	8.	Overpower ΔT	See Note 2	See Note 3 (Note 2)
8a	9.	Pressurizer Pressure – Low	≥ 1870 psig	≥ 1860 psig
8b	10.	Pressurizer Pressure – High	≤ 2360 psig	≤ 2370 psig
9	11.	Pressurizer Water Level – High	≤ 92% of instrument span	≤ 93% of instrument span
10	12.	Loss of Flow	≥ 90% of design flow per loop*	≥ 89% of design flow per loop*

LA.11

LA.11

LA.8

* Design flow per loop is one-third of the minimum allowable Reactor Coolant System Total Flow Rate as specified in Table 3.2-1

LA.8

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A.1

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION (ALLOWABLE VALUES / TRIP SETPOINTS)

ITS	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
14	13. Steam Generator Water Level--Low-Low	≥ 18% of narrow range instrument span-each steam generator	≥ 17% of narrow range instrument span-each steam generator
15	14. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	≤ 40% of full steam flow at RATED THERMAL POWER coincident with steam generator water level ≥ 25% of narrow range instrument span--each steam generator	≤ 42.5% of full steam flow at RATED THERMAL POWER coincident with steam generator water level ≥ 24% of narrow range instrument span--each steam generator
12	15. Undervoltage-Reactor Coolant Pump Busses	≥ 2905 volts-each bus	≥ 2870 volts-each bus
13	16. Underfrequency-Reactor Coolant Pump Busses	≥ 56.1 Hz - each bus	≥ 56.0 Hz - each bus
16	17. Turbine Trip		
	A. Low Trip System Pressure	≥ 45 psig	≥ 40 psig
	B. Turbine Stop Valve Closure	≥ 1% open	≥ 0% open
17	18. Safety Injection Input from ESF	Not Applicable	Not Applicable
11	19. Reactor Coolant Pump Breaker Position Trip	Not Applicable	Not Applicable

LA.11

LA.11

LA.10

LA.10

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A.1

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION (ALLOWABLE VALUES) ~~TRIP SETPOINTS~~ LA.11

NOTATION

NOTE 1: Overtemperature $\Delta T \leq \Delta T_o \left[K_1 - K_2\left(\frac{1+\tau_1 S}{1+\tau_2 S}\right)(T-T') + K_3(P-P') - f_1(\Delta I)\right]$

where:
- ΔT_o = Indicated ΔT at RATED THERMAL POWER
- T = Average temperature, °F
- T' = Indicated T_{avg} at RATED THERMAL POWER $\leq$ 586.8 °F LA.5
- P = Pressurizer pressure, psig
- P' (≥) 2235 (*) psig (indicated RCS nominal operating pressure) LA.5
- $\frac{1+\tau_1 S}{1+\tau_2 S}$ = The function generated by the lead-lag controller for T_{avg} dynamic compensation L.19
- τ_1 & τ_2 = Time constants utilized in the lead-lag controller for T_{avg} τ_1 (≥) 25 (*) secs., τ_2 (≤) 4 (*) secs. L.19 LA.5
- S = Laplace transform operator (sec^{-1})

The values denoted by * are specified in the COLR. LA.5

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION (ALLOWABLE VALUES / TRIP SETPOINTS)

LA.11

NOTATION (Continued)

Operation with 3 loops

		Operation with 2 Loops (no loops isolated)*	Operation with 2 Loops (1 loop isolated)*
K_1	1.264	K_1 = ( )	K_1 = ( )
K_2	0.0220	K_2 = ( )	K_2 = ( )
K_3	0.001152	K_3 = ( )	K_3 = ( )

A.6

LA.5

L.19

and $f_1(\Delta I)$ is a function of the indicated difference between top and bottom detectors of the power-range nuclear ion chambers; with gains to be selected based on measured instrument response during plant startup tests such that:

A.24

(i) for $q_t - q_b$ between -14 percent and +3 percent, $f_1(\Delta I) = 0$ (where q_t and q_b are percent RATED THERMAL POWER in the top and bottom halves of the core respectively, and $q_t + q_b$ is total THERMAL POWER in percent of RATED THERMAL POWER).

LA.5

(ii) for each percent that the magnitude of $(q_t - q_b)$ exceeds -14 percent, the ΔT trip setpoint shall be automatically reduced by 1.67 percent of its value at RATED THERMAL POWER.

LA.5

(iii) for each percent that the magnitude of $(q_t - q_b)$ exceeds +3 percent, the ΔT trip setpoint shall be automatically reduced by 2.00 percent of its value at RATED THERMAL POWER.

LA.5

*Values dependent on NRC approval of ECCS evaluation for these operating conditions.

The values denoted by * are specified in the COLR

A.6
LA.5

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A.1

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION (ALLOWABLE VALUES / TRIP SETPOINTS)

LA.11

NOTATION (Continued)

Note 2: Overpower $\Delta T \leq \Delta T_0[K_4 - K_5\left(\frac{\tau_3 S}{1+\tau_3 S}\right) T - K_6 (T-T") - f_2(\Delta I)]$

where: ΔT_0 = Indicated ΔT at RATED THERMAL POWER

T = Average temperature, °F

T" = Indicated T_{avg} at RATED THERMAL POWER $\leq$ 586.8°F.

L.19

K_4 $\leq$ 1.079 *

K_5 $\geq$ 0.02/°F * for increasing average temperature

LA.5

K_5 = 0 * for decreasing average temperatures

K_6 $\leq$ 0.00164 * for T > T"; K_6 = 0 for T $\leq$ T"

$\frac{\tau_3 S}{1+\tau_3 S}$ = The function generated by the rate lag controller for T_{avg} dynamic compensation

LA.9

τ_3 = Time constant utilized in the rate lag controller for T_{avg}

τ_3 $\geq$ 10 * secs.

L.19

LA.5

S = Laplace transform operator (sec^{-1})

$f_2(\Delta I)$ = 0 for all ΔI *

LA.5

Note 3: The channel's maximum trip point shall not exceed its computed trip point by more than 2 percent span (for Overpower ΔT)

A.1

2.3 percent span for Overtemperature ΔT

L.21

The values denoted by * are specified in the COLR

LA.5

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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 and are acceptable because they do not result in technical changes to the CTS.

A.2 The Functional Units required to be OPERABLE for the Reactor Trip System (RTS) instrumentation are shown in CTS Table 3.3-1. The Table defines each function with specific requirements for Channels, Applicable MODES, and Actions. A Note is added to ITS 3.3.1 Actions, which states, "Separate Condition entry is allowed for each Function." This modifies the CTS by providing a specific allowance to enter each Function separately.

This change is acceptable because it clearly states the current requirement. The CTS considers each function to be separate and independent from the other functions. This change is designated as administrative because it does not result in technical changes to the CTS.

A.3 The Action for CTS LCO 3.3.1.1 states, "As shown in Table 3.3-1." ITS LCO 3.3.1 Action A states, "One or more Functions with one or more channels inoperable, enter the Condition referenced in Table 3.3.1-1 for the channel(s), immediately."

This change is acceptable because it maintains the CTS requirements in the ITS format. The CTS and ITS refers to a Table for the requirements on each function. Any change to the functional requirements will be discussed by a specific discussion of change. This change modifies the format of the specifications but not the technical requirements. This change is designated as administrative because it does not result in technical changes to the CTS.

A.4 CTS Surveillance Requirement (SR) 4.3.1.1.1 states that each Reactor Trip System instrumentation channel shall be demonstrated OPERABLE by the performance of specific test requirements. These include a CHANNEL CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST performed for required MODES of operation and the specified frequencies shown in Table 4.3-1. ITS Table 3.3.1-1 includes the surveillance requirement column in addition to the applicable MODES or other specified condition column for each Function. ITS SRs for the CHANNEL CHECK, CHANNEL CALIBRATION, TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT), and CHANNEL OPERATIONAL TEST (COT) are listed by numbers and Frequency in the surveillance requirements section for the specification.

This change is acceptable because ITS SRs maintain the CTS requirements for testing of each RTS function. The change is one of format only and any technical change to the requirements for a RTS function is specifically addressed in an individual discussion of change. This change is designated as administrative because it does not result in technical changes to the CTS.

A.5 CTS Table 3.3-1 provides the requirements for the RTS instrumentation functions. The table's columns list the name of the function, total number of channels, channels to trip, minimum number of OPERABLE channels, applicable MODES, and associated Actions. ITS Table 3.3.1-1 is constructed from the requirements of CTS Table, but with some modifications. The ITS Table lists the name of the function, required channels, applicable MODES or other specified Conditions, and associated Conditions. This change modifies the CTS Table by deleting the columns for the channels to trip and the minimum channels OPERABLE. In addition, this change modifies the name of the columns.

This change is acceptable because it maintains the technical requirements of the CTS with the conversion to the ITS. The "channels to trip" column is provided for information only and is not a technical requirement. The number of channels to provide a trip signal is set by the design of the RTS and does not change. For each function, the ITS Bases describes how each function operates to initiate the trip of the unit. Therefore, the elimination of the columns does not modify any technical requirement.

The minimum channels OPERABLE column is not needed because ITS Conditions provide the necessary requirements to insure the minimum channels will be maintained OPERABLE. This is also set by design and alluded to by ITS Bases but not specifically addressed. The elimination of this column does not add or delete any technical requirement.

The "required channels" column incorporates the channel requirements of the instrumentation function provided by the CTS by the columns of total number of channels, channels to trip, and minimum channels OPERABLE. This requires a function, when the reactor being operated in specific MODES or specific conditions, to have a number of channels OPERABLE. If the number of OPERABLE channels is less than that required, the ITS Condition (formerly the CTS Action) must be entered. The addition of specific conditions in the ITS replaces the CTS use of various notes, which specify modifications to Actions or applicability for a function.

The MODES in which Surveillance Requirement are required is eliminated in Table 4.3-1 because the ITS Table 3.3.1-1 contains the same information. This change does not modify any technical requirement, but rather presents the information in a more logical manner. Any technical change to a function is addressed by a separate item in

this discussion of changes. This change is designated as administrative because it does not result in technical changes to the CTS.

A.6 CTS 2.2.1 in Table 2.2-1 lists various notes for the Allowable Values associated with the operation of the unit until steam generator replacement or 2-loop operation. The steam generators have been replace and 2-loop operation has never been licensed. Therefore, these notes do not provide any technical requirements and are eliminated.

This change is acceptable because no CTS or ITS RTS function relies upon these notes 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.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. A column added to CTS Table 4.3-1 addresses each function, and which the RESPONSE TIME testing requirement is applicable. The RESPONSE TIMES 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.

This change is acceptable because the requirements for RESPONSE TIMES 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.

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 CTS functions Pressurizer Pressure – Low, Pressurizer Water Level – High, Loss of Flow, Undervoltage and Underfrequency on RCP buses, and RCP Breaker Position, provide a Reactor Trip. For an inoperable channel on any of these functions, Action 8 must to be entered. Action 8 requires the inoperable channel to be placed into trip within 72 hours or the unit is required to be placed below P-7 interlock within 78

hours. The applicability for each function is MODE 1 except for Pressurizer Pressure – Low and Pressurizer Level – High, which are MODES 1 and 2. ITS 3.3.1 for functions 8.a (Pressurizer Pressure – Low), 9 (Pressurizer Water Level – High), 10 (Reactor Coolant Flow – Low), 12 (Undervoltage RCPs), and 13 (Underfrequency RCPs) requires each to be OPERABLE in MODE 1[(f)] and Condition L to be entered if a channel becomes inoperable. Note [(f)] states, "Above the P-7 (Low Power Reactor Trips Block) interlock. Condition L requires for an inoperable channel that it be placed in trip within 72 hours or reduce power below P-7 setpoint within78 hours. This change maintains the technical requirements of the CTS in the ITS format.

The purpose of this change is to provide consistent requirements for the functions as assumed in the safety analyses assumptions. This change is acceptable because each of the required Reactor Trip function is specified to be OPERABLE in the applicable MODE of operation. The Condition is consistent with appropriate Required Action to place the unit out of the MODE of applicability within Completion Times consistent with analyzed times. This change is designated as administrative because it does not result in technical changes to the CTS.

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 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)]). The MODES of applicability for these SRs are MODES 1*** and 2. The Intermediate Range channels are required to be OPERABLE in MODES 1### and 2 in Table 3.3-1. The *** and ### 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. ITS 3.3.1 for function 4, the Intermediate Range Neutron Flux channels, list the applicability as MODES 1[(b)] and 2[(c)] and Condition F and G must be entered for inoperable channel(s). Note [(b)] states, "Below the P-10 (Power Range Neutron Flux) interlocks," and note [(c)] states, "Above the P-6 (Intermediate Range Neutron Flux) interlocks." The SRs required to be performed on the channels are listed as SRs 3.3.1.1 (CHANNEL CHECK), 3.3.1.8 (CHANNEL OPERATIONAL TEST (COT)), and 3.3.1.11 (CHANNEL CALIBRATION). This changes the CTS by deleting the CHANNEL CHECK SR Q[(12)] for MODES 3*, 4*, and 5*, and modifies the applicability of the CTS from MODE 2 to MODE 2[(c)] in the ITS.

This change is acceptable because the Intermediate Range is only assumed to be OPERABLE, by the safety analyses, one decade above the overlap with the Source Ranges channels (P-6 setpoint) until the overlap with the Power Range channels (P-10 setpoint). This applicability is reflected in the CTS Action for the inoperability of a channel. The SR for MODES 3*, 4*, and 5* is not required to be performed because the SR 3.3.1.8 in MODES 1[(b)] and 2[(c)] will ensure the Intermediate Range channels are

OPERABLE. This change is designated as administrative because it does not result in technical changes to the CTS.

A.11 The CHANNEL FUNCTIONAL TEST requirements in CTS Table 4.3-1 have been changed in ITS Table 3.3.1-1 to the CHANNEL OPERATIONAL TEST (COT), TRIP ACTUATION DEVICE OPERATIONAL TEST (TADOT), or ACTUATION LOGIC TEST (ALT). The individual RTS functions will require a COT, with the exception of the trip actuation logic, which required testing would be the ALT. A trip actuation function such as manual switches or RCP breakers will require a TADOT to be performed. Each SR Frequency is replaced with an ITS SR number that corresponds to the required testing at the current frequency. The technical requirements and frequency of testing for each function will remain unchanged in the ITS requirements, unless noted and addressed by a separate discussion of change.

The change is acceptable because the COT, ALT, and TADOT maintain the technical requirements of the CHANNEL FUNCTIONAL TEST and more accurately describe the required testing for each RTS function. This change is designated as administrative because it does not result in technical changes to the CTS.

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. ITS LCO or Surveillance requirements do not require an allowance stated in each Specification, but provides the allowance by the definition specified in ITS Section 3.0. This change modifies the CTS by eliminating the reference to the provisions of Specification 3.0.4 within specifications or surveillance requirements.

This change is acceptable because ITS LCO 3.0.4 states when an LCO is not met, entry into the applicable MODE shall not be made except when the associated Actions permit continued operation for an unlimited period of time. Therefore, eliminating the reference to CTS Specification 3.0.4 is appropriate in the ITS Actions because the allowance is addressed in the ITS LCO 3.0.4 definition This change is designated as administrative because it does not result in technical changes to the CTS.

A.13 CTS 3.3.1.1 Actions 2.d in Table 3.3-1 states that the QUADRANT POWER TILT RATIO (QPTR) shall be determined to be within limit when reactor power is above 75 percent of RATED THERMAL POWER (RTP). The moveable incore detectors will be utilized to verify the QPTR when a Power Range Channel is inoperable. In this condition, the normalized symmetric power distribution is determined by either utilizing 2 sets of 4 symmetric thimble locations or a full core flux map. Every 12 hours, the results of the flux map must be compared with the indicated QPTR for consistency. The indicated QPTR is provided by the three Power Range Channels that remain OPERABLE. ITS 3.3.1 Action D.2.2 requires the performance of ITS SR 3.2.4.2, which verifies the QPTR is within its limit. This verification utilizes the

movable incore detectors to determine the QPTR. This change modifies the CTS by eliminating the details of how the QPTR is determined.

This change is acceptable because the requirement to perform a verification that QPTR is within its limit remains unchanged. The details of verification are not necessary for the Technical Specifications. This requirement is also duplicative to the requirement contained in CTS 4.2.4.2. This change permits the requirement to be stated only in the appropriate specification surveillance. This change is designated as administrative because it does not result in technical changes to the CTS.

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. This requires Action 5 to be entered for an inoperable required Source Range channel. This requirement is applicable in MODES 3, 4, and 5 with the RTBs open. Action 5 states that with the number of OPERABLE channels one less than the required by the minimum channels OPERABLE, the SHUTDOWN MARGIN is verified for compliance, in accordance with CTS Specifications 3.1.1.1 or 3.1.1.2, and performed within 1 hour and every 12 hours thereafter. The total number of Source Range channels is listed as two, and the minimum channels OPERABLE is listed as one. 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 specified conditions as MODES 3[(e)], 4[(e)], and 5[(e)] with the RTBs open, and Condition K must be entered for a required inoperable Source Range channel. Note [(e)] states, "With the RTBs open. In this condition, source range Function does not provide reactor trip but does provide indication." This change maintains the CTS technical requirements for the Source Range requirement for a shutdown condition with the RTBs open.

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 of, "one less than the required by the minimum channels OPERABLE requirement." This change is designated as administrative because it does not result in technical changes to the CTS.

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 Overtemperature, 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 Overtemperature, Overpower, Pressurizer Pressure – High, Steam Generator (SG) Water Level – Low Low, and SG Water Level Low coincident with Steam Flow /Feed Flow Mismatch requires each function to be OPERABLE in MODES 1 and 2 and requires Condition E to be entered for an inoperable channel. Condition E states with one inoperable channel, place the channel in trip within 72 hours or be in MODE 3 within 78 hours. This changes the CTS by elimination the requirement to place the unit in HOT SHUTDOWN or COLD SHUTDOWN.

The purpose of this change is appropriately direct the unit to a MODE of operation in which the functions are no longer required by the safety analysis to perform their safety function. This change is acceptable because the Condition's Required Actions direct the unit to be placed in an operating mode which the safety functions are no longer assumed by the safety analyses to provide protection. Each function is only required to be OPERABLE in MODES 1 and 2, therefore, upon entry into HOT STANDBY (MODE 3) each function is no longer required to be OPERABLE.

Therefore, eliminating the requirement for the unit to be placed in HOT SHUTDOWN or COLD SHUTDOWN is not required or justified since each function is not required to perform its safety function in MODES 4 or 5. This change is designated as administrative because it does not result in technical changes to the CTS.

A.18 CTS 3.3.1.1 Functional Unit 21B details the requirements for the Reactor Trip Bypass Breakers. This requirement lists that two channels are required to be OPERABLE in the applicable MODES, as indicated by a note ***, and Action 13 is required to be entered, if a channel (bypass breaker) becomes inoperable. The note *** to the applicable MODES states, "With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A)." CTS Action 13 states that with an inoperable bypass breaker, the breaker must be restored to OPERABLE status within one hour, or the testing of the RTB must be terminated and the bypass breaker opened. ITS Function 19 states that two trains for the Reactor Trip Breakers [(h)] are required to be OPERABLE in MODES 1 and 2. ITS Note [(h)] denotes that the requirement includes any reactor trip bypass breakers that are racked in and closed for bypassing an RTB. Condition P is required to be entered for an inoperable train, either RTB or bypass breaker. Required Action P.1 states that an inoperable train must be restored to OPERABLE status within one hour. If this cannot be accomplished, Required Action P.2 must be completed. This requires the plant to be placed in MODE 3 within 7 hours. This change modifies the CTS requirement for the Reactor Trip Bypass Breakers by including the requirement for the bypass breakers into the function for the RTBs and eliminating the separate function in the CTS.

This change is acceptable because including of the bypass breaker into the ITS requirement for the RTBs does not change the technical requirements for the bypass breaker. In the CTS and ITS requirements, if the bypass breaker becomes inoperable, that breaker must restored to OPERABLE status within one hour. If this is not accomplished, the testing of the RTB must be immediately suspended and the breaker closed. The bypass breaker must be placed in the open position immediately follow this operation. This change is designated as administrative because it does not result in technical changes to the CTS.

A.19 CTS 3.3.1.1 requirement for RTBs is listed in Table 3.3-1 as Functional Unit 21A. This function lists Action 1 to be followed if a RTB channel becomes inoperable in MODES 1 and 2. In addition to this requirement, CTS Action 14 is applicable to the RTBs for the diverse trip function of undervoltage or shunt trip device. Action 14 states that if the RTB's diverse trip function becomes inoperable, the function shall be restored to OPERABLE status within 48 hours or the RTB will be declared inoperable and Action 1 will be applied. This additionally states the breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status. ITS 3.3.1 Function 20 for the RTB's Undervoltage and Shunt Trip Mechanism are separated from the requirement of the RTBs. This function requires an undervoltage

and shunt trip mechanism to be OPERABLE for each RTB in MODES 1 and 2, and MODES 3[(a)], 4[(a)], and 5[(a)]. If either the undervoltage or shunt trip function becomes inoperable for either applicability, Conditions S or C is entered for the RTB. The Required Actions S.1 and S.2 direct that the inoperable trip mechanism to be restored to OPERABLE status within 48 hours, or be in MODE 3 within the next 6 hours. The Required Actions C.1 and C.2 direct that the inoperable trip mechanism to be restored to OPERABLE status within 48 hours. If this can be done, the initiation of action to fully insert all rods shall be started and within the next hour the Rod Control System shall be placed in a condition where any rods can not be withdrawn. The testing of the function will also be conducted in accordance with the RTB and SR 3.3.1.4 is specified. This change maintains the technical requirements of the CTS in an ITS format.

This change is acceptable because the technical requirements of the CTS are maintained. The format changes of the ITS requirements do not modify the current technical requirements, as currently interpreted. This change is designated as administrative because it does not result in technical changes to the CTS.

A.20 The requirements in CTS Table 3.3-1 for the Reactor Trip System interlocks list the designated functions as P-7, P-10, and P-13. These interlocks are required to be OPERABLE from the surveillance requirement 4.3.1.1.2, associated with CTS ITS 3.3.1.1. The P-10 and P-13 interlocks are required to provide a signal at a specific indicated power level, from either the neutron detectors (P-10-Power Range Neutron Flux channels), or power indication of the main turbine (P-13-turbine impluse chamber pressure). The P-10 and P-13 function are required to actuate at a specific setpoint with a tolerance up to the allowable value. The P-7 interlock is derived from P-10 and P-13 functions and is a logic function only. ITS 3.3.1, Table 3.3.1-1, list the Reactor Trip System Interlocks as Function 18, and the P-7 function is Function 18d. Function 18d and 18e represent the P-10 and P-13 interlocks. P-10 and P-13 functions are required to actuate and provide its specific interlocks at a specific setpoint with an allowance up to an allowed value. The P-7 Function is not a channel related interlock, but functions on a train related basis. The channel requirements for P-7 are stated as, "1 per train." Because the P-7 interlock is a logic function, there is no setpoint or allowable value limit associated with the function.

This change is acceptable because all technical requirements of the CTS are reflected in the ITS requirements. The requirements of ITS 3.3.1 Function 18 b for P-7 has not been modified the CTS requirements, except only in format. This change is designated as administrative because it does not result in technical changes to the CTS.

A.21 CTS requirements for the Power Range Instrumentation channels are listed in Table 3.3-1. This states four total channels are required in MODES 1 and 2 and Action 2[#] must be entered for an inoperable channel. The Limiting Safety System Settings listed in CTS Table 2.2-1 specifies for the Power Range Neutron Flux two trip

setpoints and allowable values. These are divided into Low and High values. The P-10 interlock in CTS Table 3.3-1 describes the requirements for enabling the Power Range Neutron Flux Low setpoint trip below the specified values. The ITS in Table 3.3.1-1 states the Power Range Neutron Flux channels, functions 2a and 2b, are to be OPERABLE in two states, High and Low Neutron Flux, with four channels required to be OPERABLE. The functions are applicable in MODES 1 and 2 for the High and MODES 1[(b)] and 2 for the Low. For the Power Range Low function Action E is required to be entered. Action E requires the channel to be placed in trip within 72 hours or be in MODE 3 within the next 6 hours. Note [(b)] states, "Below the P-10 (Power Range Neutron Flux) setpoint. This change maintains the technical requirements of the CTS as they are translated to the ITS format.

This change is acceptable because all technical requirements of the CTS are maintained by the conversion to the ITS. The ITS presentation of the CTS requirements only modifies the format and does not add or delete any technical requirements. The Power Range functions continue to require four channels to be OPERABLE in MODES 1 and 2, with the trip setpoints for High and Low Neutron Flux values required above and below the P-10 interlock. This change is designated as administrative because it does not result in technical changes to the CTS.

A.22 CTS Table 3.3-1 for the Functional Units 18.a (Low Auto Stop Oil Pressure) and 18.b (Turbine Stop Valve Closure) requires each function to be OPERABLE in MODE 1 and Action 9 to be entered for an inoperable channel. Action 9 requires an inoperable channel be placed in trip within 72 hours or reduce power to less than P-8 setpoint within the next 4 hours. ITS 3.3.1 requirements in Table 3.3.1-1 for the Turbine Trip (function16) with Low Auto Stop Oil Pressure (16a) and Turbine Stop Valve Closure (16b) list the applicable MODES as MODE 1[(g)]. Note [(g)] states, "Above the P-8 (Power Range Neutron Flux) interlock." The Table lists the Condition N to be entered for an inoperable Turbine Trip channel. Condition N states with a channel inoperable, place the channel in trip within 72 hours or reduces power below the P-8 interlock within 76 hours. This changes the format of the CTS while maintaining the technical requirements.

This change is acceptable because the technical requirements of the CTS for the required trips from the Turbine Trips are maintained in the ITS. This change is designated as administrative because it does not result in technical changes to the CTS.

A.23 CTS 3.3.1.1 for Functional Units 19, 21, and 22 lists the test requirements for the Safety Injection (SI) input to Engineered Safety Features (ESF), Reactor Trip Breakers (RTBs), and Automatic Trip Logic. Each of these functions must be tested monthly. This Frequency is modified by Note (5), which states, "Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS (STB)." ITS notation for STB utilizes a definition that states the frequency as 31 days on a STB for the RTBs, Function 19, and the Automatic Trip Logic, Function 21.

The SI input to ESF testing requirement is moved to ITS LCO 3.3.2 for incorporation, but states the frequency of testing as 31 days on STB.

This change is acceptable because the testing of the functions will continued to be required at the same frequency. The CTS definition for STB requires all trains or channels to be tested within the allowed time stated by the Frequency. ITS definition for STB states that the Frequency listed is the time for one train or channel to be tested. Under the CTS Frequency for the listed functions, two trains must complete the required testing in 62 days. The ITS Frequency requirement for each of these functions requires a train to be tested every 31 days with both trains completed in 62 days. Therefore, the testing requirements in the CTS and ITS require the same frequency for each function. This change is designated as administrative because it does not result in technical changes to the CTS.

A.24 The calculation for the Overtemperature (OT) ΔT, Functional Unit 7 in CTS Table 2.2-1 Note 1, states that the gains set for the equation are selected based on measured instrument response obtained during plant startup testing. These values for various portions of the formula have been incorporated for the OT ΔT function. This portion of Note 1 is no longer needed and not included in the ITS 3.3.1 Function 6 for the OT ΔT formula.

This change is acceptable because the setting of the gains in the OT ΔT formula were accomplished during initial startup testing and, as such, the statement is for information only. The formula gains have not been adjusted without engineering evaluation and NRC approval since the initial calculation for the OT ΔT function. This change is designated as administrative because it does not result in technical changes to the CTS.

A.25 CTS Table 4.3-1 for Function 18, Turbine Trip, specifies a CHANNEL FUNCTIONAL TEST with a frequency of S/U (1). The S/U stands for prior to a reactor startup and Note (1) specifies "If not performed within the previous 31 days." ITS 3.3.1 Function 16, Turbine Trip, requires SR 3.3.1.15, a TADOT, to be performed "prior to exceeding the P-8 interlock whenever the unit has been in MODE 3, if not performed within the previous 31 days." This change maintains the CTS surveillance requirement frequency in the ITS format.

This change is acceptable because the frequency of the required test continues to be performed in the same time period as required by the CTS. The ITS Frequency is consistent with the MODE of applicability for the function. This change is designated as administrative because it does not result in technical changes to the CTS.

A.26 CTS 3.3.1.1 requirement for RTBs is listed in Table 3.3-1 as Functional Unit 21A. This function lists Action 1 to be followed if a RTB channel becomes inoperable in MODES 1 and 2. Additionally, Action 1 states, "One channels may be bypassed for

up to 4 hours for concurrent surveillance testing of the reactor trip breaker and automatic trip logic, provided the other channel is OPERABLE." In addition to this requirement, CTS Action 14 is applicable to the RTBs for the diverse trip function of undervoltage or shunt trip device. Action 14 states that if the RTB's diverse trip function becomes inoperable, the function shall be restored to OPERABLE status within 48 hours or the RTB will be declared inoperable and Action 1 will be applied. Action 14 additionally states the breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status. ITS requirements for RTBs are listed in Table 3.3.1-1 as Function 19. This requires the RTBs to be OPERABLE in MODES 1 and 2 and Condition P to be entered if one RTB train is inoperable. Condition P is modified by a Note which states, "One RTB may be bypassed for up to 4 hours for maintenance on undervoltage or shunt trip mechanisms, provided the other train is OPERABLE." This changes the CTS requirements for the RTBs by providing 4 hours to perform maintenance on the undervoltage or shunt trip mechanism if the other train is OPERABLE.

This change is acceptable because the allowance for the RTB for inoperability of the undervoltage or shunt trip mechanism is maintained. The CTS Action's allowance for maintenance on the RTB's undervoltage and shut trip mechanism is maintained with the allowance of up to 4 hours for testing of the other RTB or automatic actuation logic. This change is designated as administrative because it does not result in technical changes to the CTS.

A.27 CTS function 20, RCP Breaker Position, provides for a Reactor Trip. For an inoperable channel Action 8 must to be entered and requires the inoperable channel to be placed into trip within 72 hours or the unit is required to be placed below P-7 interlock within 78 hours. ITS 3.3.1 for RCP Breaker Position requires Condition M for an inoperable channel that it be placed in trip within 72 hours or reduce power below P-7 setpoint within78 hours. This change maintains the technical requirements of the CTS in the ITS format.

The purpose of this change is to provide consistent requirements for the functions as assumed in the safety analyses assumptions. This change is acceptable because the required Reactor Trip function is specified to be OPERABLE in the applicable MODE of operation. The Condition is consistent with appropriate Required Action to place the unit out of the MODE of applicability within Completion Times consistent with analyzed times. This change is designated as administrative because it does not result in technical changes to the CTS.

MORE RESTRICTIVE CHANGES

M.1 Unit 1 CTS Table 4.3-1 for the RCP undervoltage function (functional unit 16) does not contain a Surveillance Requirement for a CHANNEL FUNCTIONAL TEST to be performed. The ITS in Table 3.3.1 –1 for function 12, RCP undervoltage, requires

SR 3.3.1.9 to be performed on the Unit 1 function. This changes the CTS Surveillance Requirements for Unit 1 RCP undervoltage by specifying a TADOT be performed every 92 days.

This change is acceptable because the RCP undervoltage provides a reactor trip function and has the capability of being tested with the unit at full power. Testing of the Unit 2 undervoltage function is currently required every 92 days and will continue to be required in the ITS Surveillance Requirements. This change is designated as more restrictive because the ITS requirements specify a SR to be performed that the CTS does not require.

M.2 CTS 3.3.1.1 Action 2 requires an inoperable Power Range channel to be placed in trip within 72 hours, for either the neutron flux levels or positive and negative rate trips functions being inoperable. If this can not be accomplished, the unit is required to enter LCO 3.0.3 and one hour is allowed to initiate action and 6 additional hours for the unit to be placed in HOT STANDBY. CTS LCO 3.0.3 provides the requirements when a LCO is not met and within one hour Action shall be initiated to place the unit in a MODE in which the Specification does not apply. ITS LCO 3.0.3 is required to be entered if more than one Power Range channel becomes inoperable for either of the required functions of flux level or rate trips. ITS 3.3.1 Required Actions D for an inoperable Power Range Neutron Flux channel requires the inoperable channel to be placed into trip within 72 hours with additional compensatory measures, or place the unit in MODE 3 within the next 6 hours. ITS 3.3.1 Required Action E for an inoperable Power Range channel for positive or negative rate trips, requires the inoperable channel to be placed into trip within 72 hour or the unit is required to be in MODE 3 within the next 6 hours. This changes the CTS requirements by decreasing the time allowed to be in MODE 3 from 7 hours in the CTS to 6 hours for the ITS.

This change is acceptable because the CTS requirements are modified to provide the necessary Required Actions and appropriate Completion Times. The Completion Time of six hours to reach MODE 3 from 100% RTP, in a safe manner without challenging plant systems, is consistent with other CTS and ITS requirements. This change is designated as more restrictive because the Completion Time for the unit to be placed in MODE 3 has been decreased by one hour.

M.3 CTS 3.3.1.1 Action 3.b requires for an inoperable Intermediate Range channel, when power is below P-10 and above the Intermediate Range interlock P-6, that the channel be restored to OPERABLE status prior to increasing power above the P-10 limit. ITS Required Actions F.1 and F.2 only allow operation between P-6 and P-10 power levels for a maximum time of 24 hours. After that, power level is required to either be increased above P-10 or decreased below P-6. The allowance for increasing power above P-10 is addressed by DOC L.4.. Limiting the time with an inoperable Intermediate Range channel to 24 hours changes the CTS requirements, which currently allows operation for an indefinite period of time.

This change is acceptable because a time limit is placed on the length of time the plant may operate with an inoperable Intermediate Range channel when at a power level at which the Intermediate Range channel is credited in the safety analysis. The requirement to allow only two hours to restore the instrument to OPERABLE status or decrease below P-6 is reasonable because a protection function has been significantly degraded and 24 hours is a reasonable period of time to allow for a slow and controlled power adjustment. This change is more restrictive because it restricts the time the plant may operate with an inoperable Intermediate Range channel.

M.4 CTS 3.3.1.1 Functional Unit 6 for the Source Range Neutron Flux requires Action 2 to be entered if the number of channels OPERABLE is one less than the minimum number when THERMAL POWER is below P-6 in MODE 2 operation. This Action limits the THERMAL POWER to the P-6 setpoint value until the inoperable channel is restored to OPERABLE status. ITS Function 5 Source Range Neutron Flux requires in Required Action H if one of the two required Source Range channels become inoperable a suspension of all operation involving reactivity changes. The requirement is modified by a Note that states, "Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM" This changes the CTS requirements for an inoperable Source Range channel by limiting operation involving reactivity additions.

This change is acceptable because in this condition the number of Source Range channels, which are the only channels providing indication and protection, has been reduced by 50 % and additional restriction are appropriate. Above the P-6 level, the Intermediate and Power Range channels provide indication and protection, but below P-6, only the Source Range channels are available. The Source Range channels provide the operator with capability to monitor power level and automatic operation of the protection system. This change is more restrictive because plant operation are more limited by the ITS requirements than the CTS.

M.5 CTS requirements for the Source Range instrumentation channels, Functional Unit 6, in Table 3.3-1 state for MODE 2## and MODES 3*, 4*, and 5* that Actions 15 and 5, respectively, are required to be entered for one channel inoperable. The CTS requirements do not address the possibility of two channels inoperable. If two Source Range channels did become inoperable in either applicable condition, LCO 3.0.3 must be entered. This would allow at least one hour before commencing a MODE change. ITS 3.3.1 Function 5, Source Range Neutron Flux, provides an additional Action I. This requires that if two Source Range channels become inoperable, the RTBs will be opened immediately. This changes the CTS by requiring the RTBs to be opened immediately if both Source Range channels become inoperable during start up or with the Rod Control System capable of withdrawing the shutdown and control rod banks.

This change is acceptable because with the reactor in a condition of being capable of going critical or in a start up condition with no Source Range channels OPERABLE. In this condition, the operator has no indication of power level and no automatic

safety function is capable of shutting down the plant. Therefore, the plant must be placed into a safer condition. This is accomplished by opening the RTBs and inserting all rods. This change is designated as more restrictive because the actions added are not required by the CTS.

M.6 CTS 3.3.1.1, Table 3.3-1 for Functional Unit 6, Source Range Neutron Flux requires two channels to be OPERABLE when the plant is operating in MODES 3, 4, and 5 and, the Rod Control System is not capable of rod withdrawal. If the required Source Range channel is inoperable, CTS Action 5 must be entered. Action 5 states, with the number of channels OPERABLE one less than the number required, SDM shall be verified within 1 hour and at least once per 12 hours thereafter. ITS 3.3.1 Function 5 for the Source Range channels states that 1 channel is required for MODES $3^{(e)}$, $4^{(e)}$, and $5^{(e)}$ and Condition K applies when the channel is inoperable. The notation $^{(e)}$ for the MODES requirements states that the RTBs are open. Condition K states that with the required Source Range Neutron Flux channel inoperable requires all operation involving positive reactivity be immediately suspended and ITS SR 3.1.1.1 within an hour and every 12 hours thereafter. A Note that states, "Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM" modifies the suspension of all operations involving positive reactivity addition. This changes the CTS by placing an addition restriction on operations when the required Source Range is inoperable.

This change is acceptable because the ability of the operator to monitor reactor power level is significantly degraded with the required Source Range channel inoperable. The limitation placed on operations is necessary to ensure the operator has minimum indication to accurately determine changes in reactor power level. This change is designated as more restrictive because the CTS do not currently require the suspension of all positive reactivity additions.

M.7 The requirements of CTS Surveillance Table 4.3-1 list the CHANNEL CALIBRATION of the Turbine Trip on Auto Stop Oil Pressure and Turbine Stop Valves closure as N.A. (Not Applicable). The Limiting Safety System Settings (LSSS) trip setpoint and allowable value of CTS Table 2.2-1 for the RTS instrumentation trip setpoints list values for the Turbine Trip Low Trip System pressure and Turbine Trip Turbine Stop Valve closure functions. The ITS requirement for these Turbine Trip Functions list SR 3.3.1.10 to performed at a frequency of 18 months. This changes the CTS by adding a CHANNEL CALIBRATION requirement for the Turbine Trip functions.

This change is acceptable because the periodic verification of the LSSS setpoints, up to the Allowable Values, is necessary to ensure the turbine will trip at the assumed setpoint value. This change is designated as more restrictive because the current requirement for the Turbine Trip does not require periodic CHANNEL CALIBRATION verification.

M.8 CTS Table 4.3-1 contains the Surveillance Requirements for the Intermediate Range and Source Range channels. A CHANNEL FUNCTIONAL TEST is required with a footnote. Note 13 states, "The provisions of Specification 4.0.4 are not applicable for entry in MODE 2 or 1." ITS SR 3.3.1.8 for the Intermediate and Source Ranges requires a CHANNEL OPERATIONAL TEST every 92 days. This changes the CTS by deleting a portion of the Note allowing the Specification 4.0.4 allowance.

This change is acceptable because the Specification 4.0.4 exception is not necessary because the Surveillance Requirement may be performed and evaluated without affecting the OPERABILITY of the instruments. This change is designated as more restrictive because an allowance of the CTS has been deleted in the ITS requirements.

REMOVED DETAIL CHANGES

LA.1 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Surveillance Requirement 4.3.1.1.2 requires the RTS trip functions to be response time tested. This requirement includes the following, "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." ITS SR 3.3.1.16 requires RESPONSE TIME testing of the RTS functions. This changes the CTS by moving the descriptive wording from the Specifications 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 requirement to perform RESPONSE TIME TESTING. Also, this change is acceptable because the removed information will be adequately controlled in the Technical Specification 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.2 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS 3.3.1.1 requires two Source Range channels be OPERABLE in MODE 2 ##. The note ## states that the high voltage to detector may be de-energized above P-6. ITS requirement for the Source Range channel state that two channels must be OPERABLE in MODE 2(d). Note (d) specifies, "Below the P-6 (Intermediate Range Neutron Flux) interlock" and maintains the intent of the CTS requirement. This changes the CTS by moving the allowance that the high voltage detector may be de-energized above P-6 from the Specifications 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 requirements for the Source Range channels to be OPERABLE as assumed by the safety analyses. 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.3 *(Type 2 – Removing Descriptions of System Operation)* Reactor Trip System Interlocks or "P" functions are required to be OPERABLE in CTS Table 3.3-1. These functions are designated as P-6, P-7, P-8, P-10, and P-13. Descriptive information is contained in the Condition, Function, and Setpoint columns for the interlocks. ITS 3.3.1 does not include this information in the Specifications. This changes the CTS by moving the information from the Specifications to the ITS Bases.

The removal of these details, which are related to system operation, 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 requirements to maintain the P functions OPERABLE as assumed in the safety analyses. 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 operation is being removed from the Technical Specifications.

LA.4 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Table 4.3-1 contains surveillance requirements with Notes which, provide information on the undervoltage and shunt trip circuits testing of the Reactor Trip Breakers (RTBs) and for the RTB bypass breakers in testing the automatic undervoltage trip during CHANNEL FUNCTIONAL TEST. ITS 3.3.1 SR for the RTBs and bypass RTBs does not contain this information. This changes the CTS by moving the descriptive information from the Specifications 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 necessary SR to maintain the RTB and bypass RTBs 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.5 *(Type 5 – Removal of Cycle-Specific Parameter Limits from the Technical Specifications to the Core Operating Limits Report)* CTS Table 2.2-1 for the Limiting Safety System Settings states the formulas for Overtemperature and Overpower ΔT functions. ITS 3.3.1 in Table 3.3.1 – 1 lists the formulas for the Overtemperature and Overpower ΔT functions with a reference in each that the specific variables are contained in the Core Operating Limits Report (COLR). This changes the CTS by relocating specific parameters for the Overtemperature and Overpower ΔT functions from the Technical Specifications to the COLR.

The removal of these cycle-specific parameter limits from the Technical Specifications and their relocation into the COLR is acceptable because these limits are developed or utilized under NRC-approved methodologies. The NRC documented in Generic Letter 88-16, Removal of Cycle-Specific Parameter Limits From the Technical Specifications, that 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 requirements and Surveillances that verify that the cycle-specific parameter limits are being met. The functional requirements of the Overtemperature and Overpower are retained in the Technical Specifications to ensure core protection. Also, this change is acceptable because the removed information will be adequately controlled in the COLR under the requirements provided in ITS 5.6.5, Core Operating Limits Report. ITS 5.6.5 ensures that the applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, and nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met. This change is designated as a less restrictive removal of detail change because information relating to cycle-specific parameter limits is being removed from the Technical Specifications.

LA.6 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS 3.3.1.1 Surveillance Requirement in Table 4.3-1 for the Intermediate Range channels requires a CHANNEL CHECK on a refueling basis, and shown by the designation of R (12). Note 13 states, in part, "verification that the Permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window." The requirement of verification for P-6 and P-10 is retained in ITS SR 3.3.1.8. This changes the CTS by moving the requirement of "observation of the permissive annunciator window," from the Specification to the ITS 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. The ITS still retains the requirements for the OPERABILITY of interlocks P-6 and P-10. The information about the interlocks does not provide a specific requirement for each function, but only describe the mechanics for the function verification. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.7 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS 2.2.1 Action states, "with the RTS instrumentation setpoint less conservative than the Allowable Value, the instrumentation channel must be declared inoperable." With the channels inoperable, the applicable Action of ITS 3.3.1.1 shall be entered, and the channel's trip setpoint shall be adjusted to be consistent with the Trip Setpoint value to return the instrument to OPERABLE status. The information provides no specific requirement for each function, but only describes the mechanics of how to adjust the channel to provide the required reactor protection. This changes the CTS by moving the information relating to the Trip Setpoint from the Specification to the ITS 3.3.1 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. This descriptive information associated with the Trip Setpoints and Allowable Values for determining OPERABILITY is more appropriate for the Technical Specifications Bases. All necessary requirements for each function remain in the ITS Table 3.3.1-1. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.8 *(Type 5 – Removal of Cycle-Specific Parameter Limits from the Technical Specifications to the Core Operating Limits Report)* CTS 2.2.1 in Table 2.2-1 provides in a footnote for Loss of Flow function, that the design flow per loop is one-third of the minimum allowable RCS total flow rate requirement. The minimum flow rate requirement is stated in CTS Table 3.2-1. The Allowable Value for Loss of Flow is stated in % of design flow per loop. ITS 3.3.1 does not include this information on

design flow rate. This changes the CTS by moving the information from the Specifications to the COLR, and using the indicated flow rate for the Allowable Value in ITS 3.3.1.

The removal of these cycle-specific parameter limits from the Technical Specifications and their relocation into the COLR is acceptable because these limits are developed or utilized under NRC-approved methodologies. The NRC documented in Generic Letter 88-16, Removal of Cycle-Specific Parameter Limits From the Technical Specifications, that this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. In addition, the use of the indicated flow rate is conservative as compared to the use of the design flow rate. The ITS still retains requirements that verify that the cycle-specific parameter limits are being met in ITS LCO 3.4.1 for total measured flow rate and LCO 3.3.1 for the reactor trip on measured flow rate per loop. The change from design flow rate to measured flow rate is a more conservative assumption, but it is a clarification and not a change in the intent of the flow rate requirement. Also, this change is acceptable because the removed information will be adequately controlled in the COLR under the requirements provided in ITS 5.6.5, Core Operating Limits Report. ITS 5.6.5 ensures that the applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, and nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met. This change is designated as a less restrictive removal of detail change because information relating to cycle-specific parameter limits is being removed from the Technical Specifications.

LA.9 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Table 2.2-1 Note 2 provides the calculation for the Overpower ΔT setpoint, Functional Unit 8. This states that the function generated by the rate lag controller for T_{ave} dynamic compensation is given by the formula for τ_3 ($\tau_3 = S/1+ \tau_3 S$). Also specified is the time constant utilized in the rate lag controller for T_{ave}. ITS 3.3.1 Function 7, the Overpower ΔT formula does not include this information. This changes the CTS by moving the information from the Specifications 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 all necessary requirements for the Overpower ΔT function remains in the ITS Table 3.3.1-1. 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.10 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS requirements stated in Table 2.2-1 for functions 13 and 14 describes the span of the instrument used to measure steam generator level to provide the trip setpoint and allowable value. ITS Table 3.3.1 does not include this information. This changes the CTS by moving the information for the function from the Specifications to the ITS Bases.

The removal of these details for performing surveillance requirements 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 all necessary requirements for the function remains in the ITS Table 3.3.1-1. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.11 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* The CTS lists in Tables 2.2-1 and 3.3-1 Allowable Values and Trip Setpoints. ITS 3.3.1 does not specify the Trip Setpoints. This changes the CTS by moving the Trip Setpoint from the Specifications to the Technical Requirements Manual (TRM).

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 Allowable Values to ensure the functions are maintained within design limits assumed by the safety analyses. Also, this change is acceptable because these types of procedural details will be adequately controlled in TRM. Any 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.12 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS surveillance requirement listed in Table 4.3-1 for the reactor bypass breaker states a Frequency of "M (9)." This requires the monthly testing of the bypass breaker in conjunction the RTS testing. Note 9 states, "Local manual shunt trip the reactor trip bypass breaker immediately after placing the bypass breaker into service, but prior to commencing reactor trip system testing or reactor trip breaker maintenance." ITS 3.3.1.4 is required to be performed on the RTB

bypass breaker every 31 days on a STAGGERED TEST BASIS. This test would be required when the associated train of RTS is tested or that train RTB requires maintenance. This changes the CTS by moving the note from the Specifications to the ITS 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. The ITS still retains the requirement to test the RTB bypass whenever the breaker is required to be OPERABLE. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.13 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS Table 4.3–1 states in Note 13 for the Intermediate and Source Range quarterly Surveillance that the detector plateau curves shall be obtained and evaluated. ITS states for the Source and Intermediate Range channels that SR 3.3.1.11 is required to be performed every 18 months. This changes the CTS by moving the detector plateau curves from the Specification to the ITS 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. The ITS still retains the surveillance requirement to maintain the Source and Intermediate Range channels OPERABLE. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LESS RESTRICTIVE CHANGES

L.1 *(Category 4 – Relaxation of Required Action)* CTS 3.3.1.1 in Table 3.3-1 requires for various functions that Action 15 be entered for an inoperable channel in MODES 3*, 4*, and 5*. Action 15 requires an inoperable channel be returned to OPERABLE status within 48 hours or opens the Reactor Trip Breakers (RTBs) within the next hour. ITS 3.3.1 for these functions requires ITS Action C to be entered. Action C states with one channel or train inoperable, restore the function to OPERABLE status in 48 hours or initiate action to fully insert all rods in 48 hours and place the Rod

Control System in a condition incapable of rod withdrawal within 49 hours. This changes the CTS by not requiring the RTBs to be opened but allowing an alternative action to disable the Rod Control System.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. The actuation of the remaining OPERABLE channel will be able to generate the safety function. The 48-hours allowed is the same time allowed for MODE 1 and 2. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.2 *(Category 4 – Relaxation of Required Action)* CTS 3.3.1.1 requires for an inoperable Power Range channel that Action 2 be entered. This Action requires the inoperable channel to be placed in trip within 72 hours, and both the THERMAL POWER ≤ 75 % and the Power Range Neutron Flux trip setpoint ≤ 85 % within the next 4 hours. The Action also provides an alternate option to reducing power and decreasing the trip setpoints. The option requires the channel to be placed in trip within 72 hours and the performance of a QPTR measurement every 12 hours. ITS 3.3.1 Condition D.1 requires for one Power Range Neutron Flux - High channel inoperable, the channel will be placed in trip within 72 hours and the THERMAL POWER will be reduced to ≤ 75 % within the next 6 hours. An alternative to this requirement is to place the channel in trip and perform a QPTR every 12 hours. This changes the CTS requirements by eliminating the requirement to reduce the Power Range Neutron Flux trip setpoint to ≤ 85 % within 78 hours.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. The resetting of the power range high flux trip setpoints to < 85% RTP would increase the potential for an inadvertent reactor trip and does not provide significant additional assurance of safety. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.3 *(Category 4 – Relaxation of Required Action)* CTS 3.3.1.1 Action 2 provides an option to reduce power and decrease the trip setpoints when a Power Range channel is inoperable. The option requires the channel to be placed in trip within 72 hours or a QPTR measurement is performed every twelve hours. ITS 3.3.1 Required Action D.2 maintains the requirement for placing the channel in trip and performing the QPTR measurement. A Note is added to Required Action D.2.2 that allows the Power Range channel to be considered OPERABLE, for the purpose of calculating the QPTR, if the portion of the channel continues to provide the necessary input for the QPTR calculation. This modifies the CTS by allowing the Power Range to be considered OPERABLE, for the purposes of QPTR calculation, if the channel continues to provide a valid signal to determine the power distribution. This changes the CTS by allowing an action that is not contained in the CTS.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. The Power Range functions remain OPERABLE. If a Power Range channel indication fails, the channel may continue to provide the required signal for QPTR calculations. If the portion of the Power Range channel input to QPTR is not OPERABLE, a flux map using the incore system must be performed. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.4 *(Category 4 – Relaxation of Required Action)* CTS 3.3.1.1 Functional Unit 5, Neutron Flux Intermediate Range channels, in Table 3.3-1 states the Applicability for the instruments as Modes $1^{\#\#\#}$ and 2. The $^{\#\#\#}$ requires the channels to be OPERABLE, "Below the P-10 (Power Range Neutron Flux) setpoint." If a channel becomes inoperable, Action 3 must be entered. CTS Action 3.b states with an inoperable Intermediate Range channel above P-6 but below P-10 restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-10 setpoint. CTS Action 3.c allows continued operation with an inoperable Intermediate Range channel if THERMAL POWER is greater than P-10. ITS 3.3.1 Function 4 Intermediate Range Neutron Flux in Table 3.3.1-1 lists the Applicable Modes or other specified conditions as MODE $1^{(b)}$ and $2^{(c)}$. The superscript letters for the MODES denote the specified conditions. The Intermediate Range channels are required to be OPERABLE whenever reactor power is between MODE $2^{(c)}$ (Intermediate Range Neutron Flux interlock, P-6) and MODE $1^{(b)}$ (the Power Range Neutron Flux interlock, P-10). If an Intermediate Range channel becomes inoperable when reactor power is between P-6 and P-10, either ITS Required Actions F.1 or F.2 must be met. Required Action F.1 states that THERMAL POWER must be reduced to < P-6 within 24 hours. Required Action F.2 requires that THERMAL POWER be increased to >

P-10 within 24 hours. This changes the CTS by allowing the reactor power to be increased to > P-10 (approximately 10% RTP) with an inoperable Intermediate Range channel with reactor power above the P-6 setpoint. This also changes the MODES of Applicability from MODE 1 ### and 2 to specific values of the Power Range and Intermediate Range interlocks (P-10 and P-6).

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. Above P-10, the Power Range channels provide the required protection, and below P-6, the Source Range channels provide the necessary protection function. Two hours is a reasonable period of time to allow for a slow and controlled power adjustment, with the OPERABLE Intermediate Range channel continuing to provide the required protection. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.5 *(Category 4 – Relaxation of Required Action)* CTS 3.3.1.1 Functional Unit 5, Neutron Flux Intermediate Range channels, in Table 3.3-1 states if a channel becomes inoperable, Action 3 must be entered. CTS Action 3.a states that when below P-6, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint. CTS Action 3.b states with an inoperable Intermediate Range channel above P-6 but below P-10 restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above P-10. ITS 3.3.1 Function 4 Intermediate Range Neutron Flux in Table 3.3.1-1 contains Action G. ITS Action G requires whenever reactor power is between P-6 and P-10 and two Intermediate Range channels become inoperable, ITS Required Actions G.1 and G.2 must be completed. Required Action G.1 states suspend operations involving positive reactivity additions. A Note that states, "Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM" modifies the Required Action. Required Action G.2 requires that THERMAL POWER must be decreased below P-6 within 2 hours. This changes the CTS by providing an action for two Intermediate Range channels inoperable.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a

DBA occurring during the repair period. The proposed Action precludes a power level increase and allows a reasonable period of time for a slow and controlled power adjustment with no Intermediate Range channels OPERABLE status. The Intermediate Range channels provide the necessary redundant protection feature to transition from the Source Range channels to the Power Range channels for a reactor start up. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.6 *(Category 7 – Relaxation Of Surveillance Frequency)* CTS Table 4.3-1 lists for the Power Range (Low Setpoint), Intermediate Range, and Source Range channels, the surveillance requirements for a CHANNEL FUNCTIONAL TEST (CFT). The CFT must be performed prior to a reactor start up if has not been completed within the previous 31 days by Note 1 to the SR. The Source and Intermediate Ranges additionally require a quarterly test to be performed (Q (Note 12)). ITS SR 3.3.1.8 for the Source, Intermediate, and Power Range Neutron Flux channels require a CHANNEL OPERATIONAL TEST (COT) to be performed every 92 days. Additionally, a COT must be performed for these instrument channels prior to reactor startup if not performed within the previous 92 days. With the reactor operating for more than 92 days, the COT must be performed for the Source Range within 4 hours after reducing power below the P-6 setpoint. The Power and Intermediate Range channels must perform the COT within 12 hours after power is reduced below the P–10 setpoint. This changes the CTS by extending the COT frequency requirements from 31 to 92 days prior to a reactor startup. Additionally, 4 hours is allowed for the Source Range and 12 hours for the Power and Intermediate Ranges to perform the COT after entry into the applicable MODE or specified conditions.

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 will continue to be tested at a frequency to ensure channel OPERABILITY. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

L.7 *(Category 6 – Relaxation of Surveillance Requirement Acceptance Criteria)* Unit 2 CTS surveillance requirements for the Power Range Neutron Flux High Setpoint are listed in Table 4.3-1. This requires the D (2) CHANNEL CALIBRATION test to be performed on the instrumentation channels. 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 is modified by Note 2 that states, "Adjust NIS channel if difference is greater than (-) 2%." This changes the CTS only requiring an adjustment of the Power Range channel if indicated power of the NIS channel is more than 2 % lower than the calculated power of the calorimetric.

This change is acceptable because it has been determined that the relaxed Surveillance Requirement acceptance criteria are not necessary for verification that the equipment used to meet the LCO can perform its required functions. Operating experience has shown that adjustments of NIS channels down can create non-conservative trip setpoints for the Power Range channels. The elimination of the requirement to adjust the Power Range channels when they are above the calorimetric power is conservative. The decalibration of the Power Range channels usually occurs with adjustments at low power levels. The elimination of this portion of the requirement will preclude the decalibration of the channels. This change is designated as less restrictive because less stringent Surveillance Requirements are being applied in the ITS than were applied in 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.

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 surveillance requirements for the Power Range Neutron Flux CHANNEL CALIBRATION are listed in Table 4.3-1 as M [(3)]. This requires the four Power Range channels to be compared to the incore system on a monthly basis. Note [(3)] states that the incore comparison is required to be performed above 15 % RTP. ITS SR 3.3.1.3 for the Power Range Neutron Flux must be performed every 31 EFPD. The requirement is modified by Note 2, which states, "Not required to be performed until 24 hours after THERMAL POWER is $\geq$ 15 % RTP." This changes the CTS by allowing 24 hours to perform a CHANNEL CALIBRATION after THERMAL POWER of the Power Range channels exceeds 15 % RTP for the initial surveillance testing.

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 24 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.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 for existing plant conditions by observation of the permissive annunciator window. ITS SR 3.3.1.8 for the Source, Intermediate and Power Range Neutron Flux channels requires a COT be performed every 92 days. In addition, ITS SR 3.3.1.8 allows the COT to be performed within 12 hours after reducing power below P-10 for the Power and Intermediate ranges of instrumentation. The COT must be performed for the Source Range channels within 4 hours after reducing power below P-6. This changes the CTS by allowing Source Range channels to perform a COT within 4 hours after power is reduced below the P-6 and Intermediate and Power Ranges within 12 hours after power is reduced below P-10 setpoint.

This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. With the unit shutting down, the performance of the SRs prior to entering the applicable MODE would create a distraction for the operators from performing their primary function of operating the unit safety. The 4 hours for the Source Range and 12 hours for the Intermediate and Power Range channels are appropriate because of these instruments generally pass the required surveillance requirements. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

L.11 *(Category 7 – Relaxation of Surveillance Frequency)* CTS testing requirements listed in Table 4.3-1 require the Source, Intermediate, and Power Range channels to perform a S/U (1). Note (1) states, "If not performed within the previous 31 days." ITS SRs for these ranges of instrumentation channels are listed as SR 3.3.1.7 and 3.3.1.8. The frequency of these SRs is 92 days. A Note in the Frequency column of SR 3.3.1.8 states, "Only required when not performed within previous 92 days." This changes the CTS requirement by increasing the time from 31 to 92 days for the required testing.

This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. This change is acceptable because the frequency of the routine testing is 92 days. If the test has been

performed within that period of time, the instrumentation channels are assumed to be OPERABLE. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

L.12 Not used.

L.13 *(Category 3 – Relaxation of Completion Time)* CTS 3.3.1.1 in Table 3.3-1 lists the required number of channels for Reactor Trip Breakers (RTBs) to be OPERABLE. Action 1 must be entered if one train of either function becomes inoperable. Action 1 states, "with the number of channels OPERABLE one less than required by the minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours;" ITS 3.3.1 in Table 3.3.1-1 states for the function a specific number of trains that are required to be OPERABLE. If a train of RTB becomes inoperable, Condition P must be entered. The Required Actions for Conditions P allows one hour to return an inoperable train to OPERABLE status, or six additional hours to reach MODE 3. This changes the CTS requirements by allowing one additional hour to return the inoperable train to OPERABLE status.

This change is acceptable because the Completion Time is consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the allowed Completion Time. The Function remains fully capable of performing the safety function. The allowance of one hour is reasonable to attempt to return the inoperable train to OPERABLE status and avoid the plant transient of a shut down. The time of one hour is the same allowance provided by CTS LCO 3.0.3, before a power reduction is required. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the CTS.

L.14 *(Category 1 – Relaxation of LCO Requirements)* CTS 3.3.1.1 requirements listed in Table 3.3-1 for P-6, P-8, and P-13 specifies two limits for the Allowable Values. The P-6 function lists the setpoint as $1x10^{-10}$ and allowable value as $< 3x10^{-10}$ for increasing power. The P-8 interlock for decreasing power lists the setpoint and allowable value as 28% and >27%, respectfully. Decreasing power for the P-13 interlock, the setpoint and allowable value are stated as 8% and 7%. ITS 3.3.1 requirements in Table 3.3.1-1 for the Reactor Trip System interlocks P-6, P-8, and P-13 do not list the reset setpoints and allowable values in the specifications. This changes the CTS by not requiring these specific interlocks to state the reset values for Allowable Values.

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 LCO requirements continue to ensure that the process variables are maintained consistent with the safety analyses and licensing basis. The safety function

for P-6 is to activate the Source Range channels trip. The P-6 function on increasing power allows the operator to secure the Source Range channels high voltage and block the Source Range trip. Securing the Source range high voltage is an equipment protection function. The P-8 function is required to activate the "at-power" trips. These trips actuate a reactor trip with reactor power above the P-8 setpoint of 30 % RTP. The blocking of these signals by P-8 on decreasing power below 30 % RTP is 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 Note 2, which states, "Not required to be performed until 12 hours after THERMAL POWER is ≥ 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.

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)* The CTS Frequency for the Power Range Neutron Flux CHANNEL CALIBRATION is listed in Table 4.3-1 as M [(3)] and Q [(6)]. This requires measurement of the Power Range channels Axial Flux Difference (AFD) and the results are compared to the incore instrumentation measurement of the parameter for the Over Temperature ΔT function. ITS SR 3.3.1.3

for the Power Range Neutron Flux AFD measurement is required to be compared with the incore detector measurement of AFD every 31 effective full power days (EFPD). ITS SR 3.3.1.6 requires the cross calibration of the excore system to the incore system every 92 EFPD. This changes the CTS by allowing these CHANNEL CALIBRATIONS to be performed on an EFPD basis, instead of calendar days.

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 for performing the comparison of the NIS channels indications to the incore indications on an EFPD basis. AFD changes are a function of burn up and not calendar days. The calculations of AFD and cross calibration of incore to excore system are inputs to the Over Temperature ΔT function and are not performed as a requirement for the Power Range channels. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

L.17 *(Category 6 – Relaxation Of Surveillance Requirement Acceptance Criteria)* The CTS requires a CHANNEL FUNCTIONAL TEST for the Source Range Neutron Flux channels on a quarterly basis. Normally, if the reactor has been operating in MODE 1 for greater than 92 days, the surveillance should be performed prior to entering the MODE of Applicability on a reactor shutdown. The MODES of Applicability for these channels are listed as 2, 3, 4, and 5. To not perform the required surveillance prior to entry into the MODE of Applicability requires an exception to Surveillance Requirement 4.0.4. The CTS requirements do not contain the required exception. ITS SR 3.3.1.7 for the Source Range Neutron Flux channel requires a COT be performed every 92 days. This surveillance requirement is modified by a Note, which states, "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." The applicable MODES for this requirement are listed as $2^{(d)}$, $3^{(a)}$, $4^{(a)}$, and $5^{(a)}$. Note $^{(d)}$ states, "Below the P-6 (Intermediate Range Neutron Flux) interlocks. Note $^{(a)}$ states, "With Rod Control System capable of rod withdrawal or one or more rods not fully inserted." This changes the CTS by allowing 4 hours, after entering MODE 3 from MODE 2, to perform the COT on the Source Range channels.

This change is acceptable because it has been determined that the relaxed Surveillance Requirement acceptance criteria are not necessary for verification that the equipment used to meet the LCO can perform its required functions. The allowance of 4 hours is reasonable period of time to delay the performance of the required testing during the transient condition of a plant shut down. During this period of time, the operator attention should not be distracted. Operating experience has shown that the Source Range channels usually satisfy these testing requirements, and the channels remain OPERABLE as the reactor shut down is completed. This change is designated as less restrictive because less stringent Surveillance Requirements are being applied in the ITS than were applied in the CTS.

L.18 *(Category 3 – Relaxation of Completion Time)* CTS 3.3.1.1 in Table 3.3-1 requires in MODES 3*, 4*, and 5* that Action 15 be entered for an inoperable Source Range channel. The note * states, "With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal." Action 15 requires an inoperable channel be returned to OPERABLE status within 48 hours or open the Reactor Trip Breakers (RTBs) within the next hour. ITS 3.3.1 for an inoperable Source Range channel in MODES 3[(a)], 4[(a)], and 5[(a)] requires that Action J to be entered. Note [(a)] states, "With the Rod Control System capable of rod withdrawal, or one or more rods not fully inserted." Action J states with a required channel inoperable, restore the channel to OPERABLE status in 48 hours or initiate action to fully insert all rods in 48 hours and place the Rod Control System in a condition incapable of rod withdrawal within 49 hours. This changes the CTS by not requiring the RTBs to be opened but allowing an alternative action to disable the Rod Control System.

This change is acceptable because the Completion Time is consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the allowed Completion Time. Each function maintains an OPERABLE channel and remains capable of performing the required function. The actuation of an OPERABLE channel will generate the function. The 48-hours allowed is the same time allowed for MODE 1 and 2. The additional hour is provided prior to requiring the opening of the reactor trip breakers and used in a similar manner to disable the Rod Control System. This is reasonable and allows the operator adequate time to perform the task in a controlled manner without challenging plant systems. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the CTS.

L.19 *(Category 1 – Relaxation of LCO Requirements)* CTS Table 2.2-1, Notes 1 and 2, provide the RTS instrumentation trip setpoints formulas for the calculation of Overtemperature (OT) and Overpower (OP) ΔT functions. The values used for various constants specify exact number for each constant to be adjusted. ITS Table 3.3.1-1 Notes 1 and 2 provide the formulas for the calculation of Overtemperature and Overpower ΔT functions. The values for constants P', K_1, K_2, K_3, K_4, K_5, K_6, τ_1, τ_2, and τ_3 are modified with less than or equal to ($\leq$), or greater than or less to ($\geq$) symbols to allow a tolerance. This changes the CTS by allowing the values of the constants to be set to a limit not currently allowed.

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 value of each constant of the Overtemperature and Overpower ΔT functions is only allowed to vary in the conservative direction for the function. This will ensure their setpoints will not exceed the safety analyses assumption for these

functions. 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.20 *(Category 5 – Deletion of Surveillance Requirement)* CTS 4.3.1.1.2 states, "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." ITS 3.3.1 in Table 3.3.1-1 under the Surveillance Requirements column lists SR 3.3.1.16. This SR states, "Verify RTS RESPONSE TIME is within limits." This SR is required for all RTS Functions except the following: (1) Manual Reactor Trip, (3.a) Power Range Neutron Flux High Positive Rate, (4) Intermediate Range Neutron Flux, (7) Overpower ΔT, (15) Steam/Feed Flow Mismatch and Low Steam Generator Water Level, (16) Turbine Trip, (17) SI input from ESF, (11) Reactor Coolant Pump Breaker Position Trip, (19) Reactor Trip Breakers, (20) RTB Undervoltage and Shunt Trip Mechanisms, and (21) Automatic Trip Logic. This changes the CTS by deleting the Response Time Testing requirements for the listed functions.

The purpose of ITS SR 3.3.1.16 is to ensure that the required functions are response time tested and the required times are met. This change is acceptable because the deleted Surveillance Requirement is not necessary to verify that the RTS functions used to meet the LCO are consistent with the safety analysis. Thus, appropriate RTS functions to be tested in a manner and at a frequency necessary to give confidence that the assumptions in the safety analysis are protected and the required RTS functions can perform their assumed safety function. The deletion of the Response Time Testing for the listed RTS functions is acceptable because the testing requirements are the same requirements that were originally moved from the Technical Specifications to the Technical Requirements Manual. This change is designated as less restrictive because Surveillances which are required in the CTS will not be required in the ITS.

L.21 *(Category 1 – Relaxation of LCO Requirements)* CTS 2.2 Limiting Safety System Setting states in Table 2.2-1 Note 3, "the channel's maximum trip point shall not exceed its computed trip point by more than 2 percent of span." This applies to the Overtemperature and Overpower ΔT trip setpoints for the Allowable Values as stated in Notes 1 and 2. ITS 3.3.1 in Table 3.3.1-1 states for the Overtemperature and Overpower ΔT that the functions Allowable Values are listed in Notes 1 and 2. The Overtemperature ΔT Allowable Value formula is modified by a note that states, "The Overtemperature ΔT Function Allowable Value shall no exceed the following normal trip setpoint by more than 2.3 % of ΔT span. This changes the CTS requirement for Overtemperature ΔT by increasing the % of ΔT span from a value of 2.0 to 2.3.

The purpose of ITS 3.3.1 Allowable Value for the Overtemperature ΔT change from 2.0 to 2.3 is to establish a value that is consistent with the setpoint methodology. 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 change to 2.3 % of ΔT span is consistent with the method used to calculate

the other RTS and ESFAS Allowable Values. This change is designated as less restrictive because less stringent LCO requirements are being applied in the ITS than were applied in the CTS.

UNIT 1

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. LA.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. LA.1 A.2 LA.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 LA.9

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A.1

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other specified condition	Condition ACTION	A.5
1	1. SAFETY INJECTION						
1a	a. Manual Initiation	2	1	2	1, 2, 3, 4	18 B	A.1
1b	b. Automatic Actuation	2	1	2	1, 2, 3, 4	13 C	A.1
1c	c. Containment Pressure – High	3	2	2	1, 2, 3	14* D	M.4
1d	d. Pressurizer Pressure – Low-Low	3	2	2	Proposed Note a A.11 1, 2, 3	14 D	M.4
1e	e. Differential Pressure Between Steam Lines – High	3/steam line	2/steam line twice and 1/3 steam lines	2/steam line	1, 2, 3	14 D A.7	M.4

ITS 3.3.2
03-09-00

(A.1)

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	~~TOTAL NO. OF CHANNELS~~ Required	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES (or other specified conditions)	~~ACTION~~ Condition	(A.5)
1f/g	f. Steam Flow in Two Steam Lines – High	2/steam line	~~1/steam line any 2 steam lines~~	~~1/steam line~~	1, 2, 3 (Proposed note b) (A.4)	~~14~~ D	(M.4)
	COINCIDENT WITH EITHER						
1f	T_{avg} – Low-Low	1 T_{avg}/loop	~~1 T_{avg} any 2 loops~~	~~1 T_{avg} any 2 loops~~	1, 2, 3 (Proposed note b) (A.4)	~~14~~ D	(M.4)
1g	OR, COINCIDENT WITH						
	Steam Line Pressure – Low	1 pressure/ line	~~1 pressure any 2 lines~~	~~1 pressure any 2 lines~~	1, 2, 3 (Proposed note b) (A.4)	~~14~~ D (A.7)	(M.4)

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
	2. CONTAINMENT SPRAY					
2a	a. Manual	2 sets/Train, 2 switches/set, 1 train	1 set	2 sets	1, 2, 3, 4	18 B A.1
2b	b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	19 C A.1
2c	c. Containment Pressure – High-High	4	2	3	1, 2, 3	19 A.7 E M.5
3	3. CONTAINMENT ISOLATION					
3a	a. Phase "A" Isolation					
3a1	1) Manual	2	1	2	1, 2, 3, 4	18 B A.1
3a2	2) From Safety Injection Automatic Actuation Logic (See Function 1 for all initiation functions and requirements)	2	1	2	1, 2, 3, 4	19 C A.1
3b	b. Phase "B" Isolation					
3b1	1) Manual (See Function 2.a for all functions and requirements)	2 sets, 2 switches/set	1 set	2	1, 2, 3, 4	18 A.14
3b2	2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	19 C A.1
3b3	3) Containment Pressure – High-High (See Function 2.c for all functions and requirements)	4	2	3	1, 2, 3	16 A.15

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES / Or other specified Condition	Consortium ACTION	A.5
4	4. STEAM LINE ISOLATION						
4a	a. Manual	2/steam line	1/steam line	2/steam line	L.2 proposed noted 1, 2, 3	21 F	A.1
4b	b. Automatic Actuation Logic	2	1	2	L.2 Proposed note 4 1, 2, 3	20 G	A.1
4c	c. Containment Pressure – Intermediate High-High	3	2	2	L.2 Proposed noted 1, 2, 3	19 D	M.4
4d/e	d. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	Proposed noted 1, 2, 3 A.4	19 D	M.4
						A.7	
	COINCIDENT WITH EITHER						
4d	T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	Proposed noted 1, 2, 3 A.4	19 D	M.4
	OR, COINCIDENT WITH						
4e	Steam Line Pressure – Low	1 pressure/ line	1 pressure any 2 lines	1 pressure any 2 lines	Proposed noted 1, 2, 3 A.4	19 D	M.4

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level – High-High	3/loop	2/loop	2/loop	1, 2, 3	20
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	20
c. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)				
6. AUXILIARY FEEDWATER PUMP START					
a. Manual Initiation	2	1	2	1, 2, 3	21
b. Automatic Actuation Logic	2	1	2	1, 2, 3	20
c. Steam Generator Water Level Low-Low	3/stm. gen.	2/stm. gen.	2/stm. gen.	1, 2, 3	19
d. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)				
e. Station Blackout	1/bus on 2 busses	1/bus on 2 busses	1/bus on 2 busses	1, 2, 3	21
f. Main Feed Pump Trip	2/pump	1/pump	1/pump	1, 2	20

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other specified condition	Condition ACTION	
ITS	7. LOSS OF POWER						A.5
	a. 4.16 Kv Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*	<see ITS 3.3.5>
	b. 4.16 Kv Emergency Bus Undervoltage (Grid Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*	
8c	8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS						
8b	a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	23 J (A.7)	A.10
8c	b. Low-Low T_{avg}, P-12	3	2	2	1, 2, 3	23 J (A.7)	A.10
8a	c. Reactor Trip, P-4	2	1	2	1, 2, 3	20 F	A.1

A.5

7 Insert proposed Automatic Swapover to Containment Sump Function — M.3

A.1

TABLE 3.3-3 (Continued)

TABLE NOTATION

ITS

Note a
Note b
Note c

Trip function may be blocked in this MODE below the P-11 setpoint. (Above) A.11

Trip function may be blocked in this MODE below the P-12 setpoint. (Above) A.4

Except when all MFIVs, MFRVs, and associated bypass valves are closed and de-activated or isolated by a closed manual valve. A.1

* The provisions of Specification 3.0.4 are not applicable A.7

ACTION STATEMENTS

Action C

ACTION 13 – Note

With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

Action D

ACTION 14 – Note

With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 15 – Deleted INSERT proposed Required Action D.2 M.4

Action E

ACTION 16 – Note

With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the blocked condition within 72 hours; one additional channel may be blocked for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

INSERT PROPOSED REQUIRED Action E.2 M.5

Note d

INSERT proposed Note d L.2

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TABLE 3.3-3 (Continued)

Action H

ACTION 17 – With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.

Action B

ACTION 18 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

(see ITS 3.3.5)

Action G

ACTION 20 – Note 1 With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other Channel is OPERABLE.

Action F

ACTION 21 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable Channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

Action J

ACTION 22 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant condition or apply Specification 3.0.3.

LA.10

A.10

Insert Proposed Required Action J.2

Action I

Insert Proposed Action I

M.3

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE INTERLOCKS

ITS DESIGNATION	CONDITION	SETPOINT	ALLOWABLE VALUES	FUNCTION
8b P-11	With 2 of 3 pressurizer pressure channels above setpoint	2000 psig	≤ 2010 psig	P-11 prevents manual block of safety injection actuation on low-low pressurizer pressure.
	With 2 of 3 pressurizer pressure channels below setpoint	1980 psig	≤ 1990 psig	P-11 allows manual block of safety injection actuation on low-low pressurizer pressure.
8c P-12	With 2 of 3 T_{avg} channels above setpoint	543°F (Nominal)	≤ 545°F	P-12 prevents manual block of safety injection actuation on high steam line flow.
	With 2 of 3 T_{avg} channels below setpoint	543°F (Nominal)	≥ 541°F (2) M.7	P-12 allows manual block of safety injection actuation on high steam line flow.
	LA.4	LA.8		LA.4

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TABLE 3.3-4

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
1	1. SAFETY INJECTION, TURBINE TRIP AND FEEDWATER ISOLATION (A.1)			
1a	a. Manual Initiation	Not Applicable	Not Applicable	
1b	b. Automatic Actuation Logic	Not Applicable	Not Applicable	
1c	c. Containment Pressure--High	≤ 17 psia	≤ 18.5 psia (17.7)	13 M.7
1d	d. Pressurizer Pressure -- Low-Low	≥ 1765 psig	≥ 1755 psig (1770)	M.7
1e	e. Differential Pressure Between Steam Lines--High	≤ 100 psi	≤ 112 psi (d)	A.1
1f	f. Steam Flow in Two Steam Lines--High Coincident with T_{avg}--Low-Low or Steam Line Pressure--Low	≤ A function defined as follows: a Δp corresponding to 40% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 110% of full steam flow at full load	≤ A function defined as follows: a Δp corresponding to 44% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 112.5% of full steam flow at full load	(43) M.7 <see Note c> (111) M.7
		T_{avg} ≥ 543°F ≥ 600 psig steam line pressure	T_{avg} ≥ 542°F ≥ 585 psig steam line pressure	13

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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

ITS

	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
2	2. CONTAINMENT SPRAY		
2a	a. Manual Initiation	Not Applicable	Not Applicable
2b	b. Automatic Actuation Logic	Not Applicable	Not Applicable
2c	c. Containment Pressure--High-High	≤ 27.75 psia	≤ ~~29.25~~ 28.45 psia (13) (M.7)
3	3. CONTAINMENT ISOLATION		
3a	a. Phase "A" Isolation		
3a1	1. Manual	Not Applicable	Not Applicable
3a2	2. From Safety Injection Automatic Actuation logic	Not Applicable	Not Applicable (A.6)
3a3			
3b	b. Phase "B" Isolation		
3b1	1. Manual	Not Applicable	Not Applicable
3b2	2. Automatic Actuation Logic	Not Applicable	Not Applicable
3b3	3. Containment Pressure--High-High	≤ 27.75 psia (LA.8)	≤ 29.25 psia (13) Refer to Function 2.c for all Functions and Requirements (A.15)

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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

ITS	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
4	4. STEAM LINE ISOLATION			
4.a	a. Manual	Not Applicable	Not Applicable	
4.b	b. Automatic Actuation Logic	Not Applicable	Not Applicable	
4.c	c. Containment Pressure--Intermediate High-High	≤ 17.8 psia	≤ (19.3) psia (18.5)	13 M.7
4.d	d. Steam Flow in Two Steam lines--High Coincident with T_{avg} --Low-Low Or Steam Line Pressure--Low	≤ A function defined as follows: a Δp corresponding to 40% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 110% of full steam flow at full load.	≤ A function defined as follows: a Δp corresponding to (43) 44% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to (111) 111.5% of full steam flow at full load.	M.7 (see Note c) M.7
		T_{avg} ≥ 543°F	T_{avg} ≥ 542°F	13
		≥ 600 psig steam line pressure	≥ 585 psig steam line pressure	
5	5. TURBINE TRIP AND FEEDWATER ISOLATION			
5.b	a. Steam Generator Water level--High-High	≤ 75% of narrow range instrument span each steam generator	≤ 76% of narrow range instrument span each steam generator	LA.7

LA.8

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TABLE 3.3-4 (continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

ITS	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
6	6. AUXILIARY FEEDWATER PUMP START			
	a. Manual	N. A.	N.A.	L.1
6a	b. Automatic Actuation Logic	N. A.	N. A.	
6b	c. Steam Generator Water Level Low-Low	≥18% of narrow range instrument span each steam generator	≥17% of narrow range instrument span each steam generator	LA.3
6c	d. S. I.	See 1 above (all S.I. Setpoints)		
6d	e. Station Blackout	≥2392 volts on Transfer Bus	≥2184 volts on Transfer Bus	LA.5
6e	f. Trip of Main Feed Pump	N. A.	N. A.	
		LA.8		
	7. LOSS OF POWER			
	a. 4160 Volt Emergency Bus Undervoltage (Loss of Voltage)	3080 ±13 volts with a time delay of 2.0 ±0.5 seconds	≥2989 volts with a time delay of ≤3.0 seconds	See ITS 3.3.5
	b. 4160 Volt Emergency Bus Undervoltage (Degraded Voltage)	3746 ±7 volts with a time delay of 56 ±6 seconds	≥3688 volts with a time delay of ≤63 seconds	
7	INSERT proposed FUNCTION 7		≥18.4% and ≤20.4%	M.3

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PAGES 3/4 3-27 THRU 3/4 3-30 ARE DELETED

(The next Page is 3/4 3-31)

ITS 3.3.2

A.1

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A.1

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (COT, TADOT, ALT, MRT)	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test
1. SAFETY INJECTION						
a. Manual Initiation	N.A.	N.A.	3.3.2.7 R(11) A.12	N.A.	1, 2, 3, 4	N/A A.16
b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M(12) LA.2	3.3.2.5 Q(14) A.1	1, 2, 3, 4	N/A A.16
c. Containment Pressure – High	3.3.2.1 Q A.1	3.3.2.8 R A.1	3.3.2.4 Q(13) LA.6	N.A.	1, 2, 3	3.3.2.9
d. Pressurizer Pressure – Low-Low	3.3.2.1 Q A.1	3.3.2.8 R A.1	3.3.2.4 Q A.3	N.A.	1, 2, 3	3.3.2.9
e. Differential Pressure Between Steam Lines – High	3.3.2.1 Q A.1	3.3.2.8 R A.1	3.3.2.4 Q A.3	N.A.	1, 2, 3	3.3.2.9
f. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	3.3.2.1 Q A.1	3.3.2.8 R A.1	3.3.2.4 Q A.3	N.A.	1, 2, 3	3.3.2.9
2. CONTAINMENT SPRAY						
a. Manual Initiation	N.A.	N.A.	3.3.2.7 R(11) A.12	N.A.	1, 2, 3, 4	N/A A.16
b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M(12) LA.2	3.3.2.5 Q(14) A.1	1, 2, 3, 4	N/A A.16
c. Containment Pressure – High-High	3.3.2.1 Q A.1	3.3.2.8 R A.1	3.3.2.4 Q(13) LA.6	N.A.	1, 2, 3	3.3.2.9

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HTS 3.3.2.9

A.1

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test
				A.3 COT TADOT MLT ALT		A.8	A.1
3	3. CONTAINMENT ISOLATION						
3a	a. Phase "A" Isolation						
3a1	1) Manual	N.A.	N.A.	3.3.2.7 R(1) A.12	N.A.	1, 2, 3, 4	NA A.16
3a2	2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M(2) LA.2	3.3.2.5 Q(4) A.1	1, 2, 3, 4	NA A.16
3a3	Refer to Function 1 for functions and requirements		A.6				
3b	b. Phase "B" Isolation	A.14					
3b1	1) Manual	Refer to Function 2A for functions and requirements	N.A.	R(1)	N.A.	1, 2, 3, 4	
3b2	2) Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M(2) LA.2	3.3.2.5 Q(4) A.1	1, 2, 3, 4	NA A.16
3.	3) Containment Pressure – High-High	A.15 S	R	Q(3)	N.A.	1, 2, 3	
	Refer to Function 2c for functions and requirements						
4	4. STEAM LINE ISOLATION						
4a	a. Manual	N.A.	N.A.	3.3.2.7 R(1) A.12	N.A.	1, 2, 3	NA A.16
4b	b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M(2) LA.2	3.3.2.5 Q(4) A.1	1, 2, 3	NA A.16
4c	c. Containment Pressure – Intermediate High-High	3.3.2.1 A.1	3.3.2.8 R A.1	3.3.2.4 Q(3) LA.6	N.A.	1, 2, 3	3.3.2.9
4d	d. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	3.3.2.1 A.1	3.3.2.8 R A.1	3.3.2.3 Q A.3	N.A.	1, 2, 3	3.3.2.9

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TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

ITS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (COT, TADOT, MRT, ALT)	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test
5 5. TURBINE TRIP AND FEEDWATER ISOLATION						A.8
5b a. Steam Generator Water Level – High-High	3.3.2.1 R A.1	3.3.2.8 R A.1	3.3.2.4 R A.3	N.A.	1, 2, 3#	3.3.2.9 A.1
5a b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A	3.3.2.2 3.3.2.3 M LA.2	3.3.2.5 R A.1	1, 2, 3#	NA A.16
5c c. Safety Injection (SI)		See 1 above (all SI Surveillance Requirements)				
6 6. AUXILIARY FEEDWATER PUMPS						
a. Manual	N.A.	N.A.	R(1)	N.A. L.1	1, 2, 3	
6a b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M LA.2	3.3.2.5 R A.1	1, 2, 3	NA A.16
6b c. Steam Generator Water Level – Low-Low	3.3.2.1 R A.1	3.3.2.8 R A.1	3.3.2.4 R A.3	N.A.	1, 2, 3	3.3.2.9 L3
6c d. Safety Injection (SI)		See 1 above (all SI Surveillance Requirements)				
6d e. Station Blackout	N.A.	3.3.2.8 R A.1	3.3.2.6 NA M.6	N.A.	1, 2, 3	3.3.2.9
6e f. Main Feedwater Pump Trip	N.A.	3.3.2.8 NA M.2	3.3.2.7 R A.1	N.A.	1, 2	3.3.2.9

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TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER 4.16 KV Emergency Bus					
a. Loss of Voltage	N.A.	R	$Q^{(5)}$	N.A.	1, 2, 3, 4
b. Degraded Voltage	N.A.	R	$Q^{(5)}$	N.A.	1, 2, 3, 4
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	N.A.	R	R	N.A.	1, 2, 3
b. Low - Low T_{avg}, P-12	N.A.	R	R	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	R	N.A.	1, 2, 3

7 Insert Proposed SRs for Function 7

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ITS 3.3.2
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ITS

Note e

TABLE 4.3-2 (Continued)

TABLE NOTATION

\# Except when all MFIVs, MFRVs and associated bypass valves are closed and deactivated or isolated by a closed manual valve. A.8

(1) Manual actuation switches shall be tested at least once per 18 months during shutdown. A.12

(2) 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. LA.2

(3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter. LA.6

(4) Only slave relays that do not satisfy any of the following criteria will be functionally tested:

1. A single failure in the Safeguards Test Cabinet circuitry would cause an inadvertent RPS or ESF actuation.
2. The test will adversely affect two or more components in one ESF system or two or more ESF systems.
3. The test will create a transient (reactivity, thermal, or hydraulic) condition on the RCS.

< Note in SR 3.3.2.5 >

(5) Each train or logic channel shall be functionally tested up to and including input coil continuity testing to the ESF slave relays. < see ITS 3.3.5 >

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UNIT 2

ITS 3.3.2

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ITS 3,3 — INSTRUMENTATION

3.3.2 — 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.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

INSERT PROPOSED NOTE TO ACTIONS

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.

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

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 on a STAGGERED TEST BASIS 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.1 A.2 LA.1 A.2 LA.1 A.2 A.3 A.9 A.9 LA.9

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TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

ITS	FUNCTIONAL UNIT	Required TOTAL NO OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	Or other Specified Condition APPLICABLE MODES	Condition ACTION	A.5
1	1. SAFETY INJECTION						
1a	a. Manual Initiation	2	1	2	1, 2, 3, 4	B	A.1
1b	b. Automatic Actuation	2	1	2	1, 2, 3, 4	C	A.1
1c	c. Containment Pressure – High	3	2	2	1, 2, 3	D	M.4
1d	d. Pressurizer Pressure – Low-Low	3	2	2	Proposed note a 1, 2, 3 A.11	D	M.4
1e	e. Differential Pressure Between Steam Lines – High	3/steam line	2/steam line twice and 1/3 steam lines	2/steam line	1, 2, 3	D	M.4
						A.7	

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
f. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3	
COINCIDENT WITH EITHER					
T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	1, 2, 3	
OR, COINCIDENT WITH					
Steam Line Pressure – Low	1 pressure/line	1 pressure any 2 lines	1 pressure any 2 lines	1, 2, 3	

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES (Or other specified conditions)	Condition ACTION	A.5
ITS						
2. CONTAINMENT SPRAY						
a. Manual	2 sets (Per train) 2 switches/set (2 trains) A.11	1 set	2 sets	1, 2, 3, 4	18 B	A.1
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13 C	A.1
c. Containment Pressure – High-High	4	2	3	1, 2, 3	16 E	M.5
3. CONTAINMENT ISOLATION						
a. Phase "A" Isolation						
1) Manual	2	1	2	1, 2, 3, 4	18 B	A.1
2) From Safety Injection Automatic Actuation Logic (See Function 1 for all initiation function and requirements)	2 A.6	1	2	1, 2, 3, 4	13 C	A.1
b. Phase "B" Isolation						
1) Manual (See Function 2.a for all function and requirements)	A.14 2 sets 2 switches/set	1 set	2	1, 2, 3, 4	18	A.14
2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13 C	A.1
3) Containment Pressure – High-High (See Function 2.c for all functions and requirements)	A.15	2	3	1, 2, 3	16	A.15

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	other specified condition	ACTION
4. STEAM LINE ISOLATION						
a. Manual	2/steam line	1/steam line	2/steam line	1, 2, 3		21
b. Automatic Actuation Logic	2	1	2	1, 2, 3		20
c. Containment Pressure – Intermediate High-High	3	2	2	1, 2, 3		18
d. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3		18
COINCIDENT WITH EITHER						
T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	1, 2, 3		18
OR, COINCIDENT WITH						
e. Steam Line Pressure – Low	1 pressure/line	1 pressures any 2 lines	1 pressure any 2 lines	1, 2, 3		18

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES or other Specified Conditions	Condition ACTION	
5	5. TURBINE TRIP & FEEDWATER ISOLATION						A.5
5b	a. Steam Generator Water Level – High-High	3/loop	2/loop	2/loop	1, 2, 3 Proposed note A.1	14 A.7 D	M.4
5a	b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3 Proposed note A.1	20 B	A.1
5c	c. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)					
6	6. AUXILIARY FEEDWATER PUMP START						
	a. Manual Initiation	2	1	2	1, 2, 3	21	L.1
6a	b Automatic Actuation Logic	2	1	2	1, 2, 3	20 G	A.1
6b	c. Steam Generator Water Level Low-Low	3/stm. gen.	2/stm. gen	2/stm. gen A.5	1, 2, 3	14 D A.7	M.4
6c	d. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)					
6d	e. Station Blackout	1/bus on 2 busses	1/bus on 2 busses	1/bus on 2 busses	1, 2, 3	21 F	A.1
6e	f. Main Feed Pump Trip	2/pump	1/pump	1/pump A.5	1, 2	17 H	A.1

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	Required TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	Condition ACTION	A.5
ITS						
7. LOSS OF POWER						
a. 4.16 Kv Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*	<see ITS 3.3.5>
b. 4.16 Kv Emergency Bus Under Voltage (Grid Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*	
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS						
8b a. Pressurizer Pressure, P-11	3	2 2 2		1, 2, 3	21 J	A.10
8c b. Low-Low T_{avg}, P-12	3	2 2 2		1, 2, 3	21 J	A.10
8a c. Reactor Trip, P-4	2	1 2		1, 2, 3	21 F	A.1
		A.5			A.7	
7 <Insert proposed Automatic Swapover to Containment Sump Function>						M.3

A.1

TABLE 3.3-3(Continued)

TABLE NOTATION

ITS
Note a
Note b
Note c

* Trip function may be blocked in this MODE below the P-11 setpoint. (Above) — A.11

** Trip function may be blocked in this MODE below the P-12 setpoint. (Above) — A.4

(##) Except when all MFIVs, MFRVs, and associated bypass valves are closed and de-activated or isolated by a closed manual valve. — A.1

* The provisions of Specification 3.0.4 are not applicable. — A.7

ACTION STATEMENTS

Action C — ACTION 13 – (Note) With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

Action D — ACTION 14 – (Note) With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 15 – Deleted (INSERT proposed Required Action D.2) — M.4

Action E — ACTION 16 – (Note) With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the blocked condition within 72 hours; one additional channel may be blocked for up to 12 hours for surveillance testing per Specification 4.3.2.1.1

(INSERT proposed Required Action E.2) — M.5

Note d — (INSERT proposed Note d) — L.2

A.1

ITS

TABLE 3.3-3 (Continued)

Action H — ACTION 17 – With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.

Action B — ACTION 18 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

(SEE ITS 3.3.5)

Action G — ACTION 20 – Note

With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and at least HOT SHUTDOWN within the following 6 hours; however one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other Channel is OPERABLE.

Action F — ACTION 21 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable Channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

Action J — ACTION 22 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant condition or apply Specification 3.0.3.

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Insert Proposed required Action J.2

Action I — Insert Proposed Action I

M.3

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TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE INTERLOCKS

	DESIGNATION	CONDITION	SETPOINT	ALLOWABLE VALUES	FUNCTION
8b	P-11	With 2 of 3 pressurizer pressure channels above setpoint	2000 psig	≤ 2010 psig	P-11 prevents manual block of safety injection actuation on low-low pressurizer pressure.
		With 2 of 3 pressurizer pressure channels below setpoint	1980 psig	≤ 1990 psig	P-11 allows manual block of safety injection actuation on low-low pressurizer pressure.
8c	P-12	With 2 of 3 T_{avg} channels above setpoint	543°F (Nominal)	≤ 545°F	P-12 prevents manual block of safety injection actuation on high steam line flow.
		With 2 of 3 T_{avg} channels below setpoint	543°F (Nominal)	≥ 541°F (2) (M.7)	P-12 allows manual block of safety injection actuation on high steam line flow

LA.4 LA.8 LA.4

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TABLE 3.3-4

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

ITS

	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
1	1. SAFETY INJECTION, TURBINE TRIP AND FEEDWATER ISOLATION (A.1)			
1a	a. Manual Initiation	Not Applicable	Not Applicable	
1b	b. Automatic Actuation Logic	Not Applicable	Not Applicable	
1c	c. Containment Pressure--High	≤ 17 psia	≤ ~~18.5~~ 17.7 psia	M.7
1d	d. Pressurizer Pressure--Low-Low	≥ 1765 psig	≥ ~~1755~~ 1770 psig	M.7
1e	e. Differential Pressure Between Steam Lines--High	≤ 100 psi	≤ 112 psi (d)	A.1
1f	f. Steam Flow in Two Steam Lines--High Coincident with T_{avg}--Low-Low or Steam Line Pressure--Low	≤ A function defined as follows: a Δp corresponding to 40% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 110% of full steam flow at full load	≤ A function defined as follows: a Δp corresponding to ~~43~~ 42% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to ~~110~~ 111% of full steam flow at full load	43 M.7 <see Note c> 111 M.7
		T_{avg} ≥ 543°F ≥ 600 psig steam line pressure	T_{avg} ≥ 542°F ≥ 585 psig steam line pressure	

LA.8

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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

ITS

	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
2	2. CONTAINMENT SPRAY			
2a	a. Manual Initiation	Not Applicable	Not Applicable	
2b	b. Automatic Actuation Logic	Not Applicable	Not Applicable	
2c	c. Containment Pressure--High-High	≤ 27.75 psia	≤ ~~29.25~~ 28.45 psia	M.7
3	3. CONTAINMENT ISOLATION			
3a	a. Phase "A" Isolation			
3a1	1. Manual	Not Applicable	Not Applicable	
3a2	2. From Safety Injection Automatic Actuation logic	Not Applicable	Not Applicable	A.6
3a3				
3b	b. Phase "B" Isolation			
3b1	1. Manual	Not Applicable	Not Applicable	
3b2	2. Automatic Actuation Logic	Not Applicable	Not Applicable	
3b3	3. Containment Pressure--High-High	≤ 27.75 psia	≤ ~~29.25~~ psia	A.15

Refer to Function 2.c for all Function and Requirements

LA.8

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A.1

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

ITS	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
4	4. STEAM LINE ISOLATION		
4.a	a. Manual	Not Applicable	Not Applicable
4.b	b. Automatic Actuation Logic	Not Applicable	Not Applicable
4.c	c. Containment Pressure--Intermediate High-High	≤ 17.8 psia	≤ ~~19.3~~ 18.5 psia (M.7)
4.d	d. Steam Flow in Two Steam lines--High Coincident with T_{avg}--Low-Low Or Steam Line Pressure--Low	≤ A function defined as follows: a Δp corresponding to 40% of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to 110% of full steam flow at full load.	≤ A function defined as follows: a Δp corresponding to ~~40~~ 43 (M.7) of full steam flow between 0% and 20% load and then a Δp increasing linearly to a Δp corresponding to ~~110~~ 111 (M.7) of full steam flow at full load. (See Note C)
		T_{avg} ≥ 543°F	T_{avg} ≥ 542°F
		≥ 600 psig steam line pressure	≥ 585 psig steam line pressure
5	5. TURBINE TRIP AND FEEDWATER ISOLATION		
5.b	a. Steam Generator Water level--High-High	≤ 75% of narrow range instrument span each steam generator (LA.8)	≤ 76% of narrow range instrument span each steam generator (LA.7)

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TABLE 3.3-4 (continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

ITS	FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
6	6. AUXILIARY FEEDWATER PUMP START			
	a. Manual	Not Applicable	Not Applicable	L.1
6a	b. Automatic Actuation Logic	Not Applicable	Not Applicable	
6b	c. Steam Generator Water Level Low-Low	≥18% of narrow range instrument span each steam generator	≥17% of narrow range instrument span each steam generator	LA.3
6c	d. S. I.	See 1 above (all S.I. Setpoints)		
6d	e. Station Blackout	≥2392 volts on Transfer Bus	≥2184 volts on Transfer Bus	LA.5
6e	f. Trip of Main Feed Pump	N. A.	N. A.	
	LA.8			
	7. LOSS OF POWER			
	a. 4160 Volt Emergency Bus Undervoltage (Loss of Voltage)	3080 ±13 volts with a time delay of 2.0 ±0.5 seconds	≥2989 volts with a time delay of ≤3.0 seconds	See ITS 3.3.5
	b. 4160 Volt Emergency Bus Undervoltage (Degraded Voltage)	3746 ±7 volts with a time delay of 56 ±6 seconds	≥3688 volts with a time delay of ≤63 seconds	
7	Insert Proposed Function 7		≥18.4% and ≤20.4%	M.3

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TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (SOT, TADOT, ALT, ART)	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED	Response Time Test
1	1. SAFETY INJECTION			A.3		A.8	A.1
1a	a. Manual Initiation	N.A.	N.A.	3.3.2.7 R A.12	N.A.	1, 2, 3, 4	NA A.16
1b	b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M LA.2	3.3.2.5 Q A.1	1, 2, 3, 4	NA A.16
1c	c. Containment Pressure – High	3.3.2.1 M A.1	3.3.2.8 R A.1	3.3.2.4 Q LA.6	N.A.	1, 2, 3	3.3.2.9
1d	d. Pressurizer Pressure – Low-Low	3.3.2.1 M A.1	3.3.2.8 R A.1	3.3.2.4 Q A.3	N.A.	1, 2, 3	3.3.2.9
1e	e. Differential Pressure Between Steam Lines – High	3.3.2.1 M A.1	3.3.2.8 R A.1	3.3.2.4 Q A.3	N.A.	1, 2, 3	3.3.2.9
1f/g	f. Steam Flow in Two Steam Lines – High Coincident with	3.3.2.1 M A.1	3.3.2.8 R A.1	3.3.2.4 Q A.3	N.A.	1, 2, 3	3.3.2.9
1f	T_{avg} – Low-Low or Steam Line						
1g	Pressure – Low						
2	2. CONTAINMENT SPRAY						
2a	a. Manual Initiation	N.A.	N.A.	3.3.2.7 R A.12	N.A.	1, 2, 3, 4	NA A.16
2b	b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2 3.3.2.3 M LA.2	3.3.2.5 Q A.1	1, 2, 3, 4	NA A.16
2c	c. Containment Pressure – High-High	3.3.2.1 M A.1	3.3.2.8 R A.1	3.3.2.4 Q LA.6	N.A.	1, 2, 3	3.3.2.9

A.1

TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST (A.3: COT, TADOT, MLT, ALT)	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED (A.8)	Response Time Test (A.1)
3. CONTAINMENT ISOLATION						
a. Phase "A" Isolation						
1) Manual	N.A.	N.A.	3,3,2,7 R A.12	N.A.	1, 2, 3, 4	NA — A.16
2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	3,3,2,3 3,3,2,4 M LA.2	3,3,2,5 Q A.1	1, 2, 3, 4	NA — A.16
Refer to Function 1 for functions and requirements (A.6)						
b. Phase "B" Isolation						
1) Manual (Refer to Function 2.a for functions and requirements (A.14))	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4	
2) Automatic Actuation Logic	N.A.	N.A.	3,3,2,2 3,3,2,3 M LA.2	3,3,2,5 Q A.1	1, 2, 3, 4	NA — A.16
3) Containment Pressure – High-High (A.15)	S	R	Q(3)	N.A.	1, 2, 3	
Refer to Function 2.c for functions and requirements						
4. STEAM LINE ISOLATION						
a. Manual	N.A.	N.A.	3,3,2,7 R A.12	N.A.	1, 2, 3	NA — A.16
b. Automatic Actuation Logic	N.A.	N.A.	3,3,2,2 3,3,2,3 M LA.2	3,3,2,5 Q A.1	1, 2, 3	NA — A.16
c. Containment Pressure – Intermediate High-High	3,3,2,1 S A.1	3,3,2,8 R A.1	3,3,2,4 Q LA.6	N.A.	1, 2, 3	3,3,2,9
d. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	3,3,2,1 S A.1	3,3,2,8 R A.1	3,3,2,3 Q A.3	N.A.	1, 2, 3	3,3,2,9

A.1

TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED	
5. TURBINE TRIP AND FEEDWATER ISOLATION						
a. Steam Generator Water Level – High-High	3.3.2.1 (A.1)	3.3.2.8 (A.1)	3.3.2.4 (A.3)	N.A.	1, 2, 3#	3.3.2.9
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	3.3.2.2, 3.3.2.3 (LA.2)	3.3.2.5 (A.1)	1, 2, 3#	NA (A.16)
c. Safety Injection (SI)	See 1 above (All SI Surveillance Requirements)					
6. AUXILIARY FEEDWATER PUMPS						
a. Manual	N.A.	N.A.	R(1)	N.A. (L.1)	1, 2, 3	
b. Automatic Actuation Logic	N.A.	N.A.	3.3.2.2, 3.3.2.3 (M.2) (LA.2)	3.3.2.5 (A.1)	1, 2, 3	NA (A.16)
c. Steam Generator Water Level – Low-Low	3.3.2.1 (A.1)	3.3.2.8 (A.1)	3.3.2.4 (A.3)	N.A.	1, 2, 3	3.3.2.9 (L.3)
d. Safety Injection (SI)	See 1 above (all SI Surveillance Requirements)					
e. Station Blackout	N.A.	3.3.2.8 (M.1)	3.3.2.6 (M.6)	N.A.	1, 2, 3	3.3.2.9
f. Main Feedwater Pump Trip	N.A.	N.A. (M.2)	3.3.2.7 (A.1)	N.A.	1, 2	3.3.2.9

Response Time Test (A.11) (A.8)

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TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER 4.16 KV Emergency Bus					
a. Loss of Voltage	N.A.	R	$Q^{(5)}$	N.A.	1, 2, 3, 4
b. Degraded Voltage	N.A.	R	$Q^{(5)}$	N.A.	1, 2, 3, 4
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	N.A.	R	M(1)	N.A.	1, 2, 3
b. Low-Low T_{avg}, P-12	N.A.	R	M(1)	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	R	N.A.	1, 2, 3
7 Insert proposed SRs for Function 7					

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Note e

TABLE 4.3-2 (Continued)

TABLE NOTATION

\# Except when all MFIVs, MFRVs and associated bypass valves are closed and deactivated or isolated by a closed manual valve. (A.8)

(1) ~~Manual actuation switches shall be tested at least once per 18 months during shutdown.~~ (A.12)

(2) ~~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.~~ (LA.2)

(3) ~~The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.~~ (LA.6)

(4) Only slave relays that do not satisfy any of the following criteria will be functionally tested:

1. A single failure in the Safeguards Test Cabinet circuitry would cause an inadvertent RPS or ESF actuation.
2. The test will adversely affect two or more components in one ESF system or two or more ESF systems.
3. The test will create a transient (reactivity, thermal, or hydraulic) condition on the RCS.

(Note IN SR 3.3.2.5)

(5) Each train or logic channel shall be functionally tested up to and including input coil continuity testing to the ESF slave relays. (SEE ITS 3.3.5)

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 and are acceptable because they do not result in technical changes to the CTS.

A.2 CTS Actions a and b for LCO 3.3.2.1 require the applicable Action requirements of Table 3.3-3 be entered for an inoperable channel until the required channel is restored to OPERABLE status. ITS LCO 3.3.2 Action A states for an ESFAS function with one or more required channels or trains inoperable, the referenced Condition in Table 3.3.2-1 for the channel(s) or train(s) be entered immediately. The Actions of the ITS are modified by a Note which states, "Separate Condition entry is allowed for each Function."

This change is acceptable because the Note provides a clarification for the current requirements and does not modify the technical requirements of the CTS LCO's Actions. The proposed Note clarifies the CTS for this requirement without any technical change. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.3 CTS Surveillance Requirement 4.3.2.1.1 states that each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of specific test requirements. This includes a CHANNEL FUNCTIONAL TEST (CFT) shown in Table 4.3-2. ITS Table 3.3.2-1 includes the SRs in a column for each Function. The ITS SRs for the TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT), ACTUATION LOGIC TEST (ALT), MASTER RELAY TEST (MRT), and CHANNEL OPERATIONAL TEST (COT) are listed by numbers in the Surveillance Requirements section for the specification.

This change is acceptable because the ITS SRs maintain the CTS requirements for testing of each Function. The change is one of format only and any technical change to the requirements for a Function is specifically addressed in an individual discussion of change. The CTS CFT is divided into several parts in the ITS requirements, and becomes the COT for analog devices, i.e., pressure or temperature channels, and the TADOT for on/off channels, i.e., manual switches for SI, Containment Spray, and etc. For the logic testing requirements, the ALT and MRT are the appropriate test designations. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.4 CTS Functional Unit 4.d of Table 3.3-3 specifies, "Steam Flow in Two Steam Lines – High Coincident with either T_{ave} – Low Low or Steam Line Pressure – Low," for Steam Line Isolation is required to be OPERABLE in MODES 1, 2, 3[##]. The notation [##] states the function may be blocked in MODE 3 below P-12 setpoint. ITS Table 3.3.2-1 requires the High Steam Flow in Two Steam Lines Coincident with T_{AVE} – Low Low function to be OPERABLE in MODES 1, 2[(d)], and 3[(d) (b)]. Note [(d)] provides a provision that states, "Except when all MSTVs are closed and de-activated." The Note [(d)] allowance is discussed in a less restrictive change in this discussion of changes. Note [(b)] states, "Above the P-12 (T_{ave}-Low Low) interlock." The Note [(b)] addition modifies the CTS by providing a clarification for the functional requirements.

This change is acceptable because no mechanism exists that could allow the block of Steam Line Isolation from Steam Flow in Two Steam Lines – High Coincident with either T_{ave} – Low Low or Steam Line Pressure – Low. The allowance provided by the CTS was incorrect and eliminated. ITS requirement requires the function to be OPERABLE above the P-12 setpoint and does not allow a block of the function. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.5 CTS Table 3.3-3 provides the requirements for the ESFAS instrumentation functions. The table's columns list the name of the function, total number of channels, channels to trip, minimum number of OPERABLE channels, applicable MODES, and associated Actions. ITS Table 3.3.2-1 is constructed from the requirements of CTS Table, but with some modifications. The ITS Table requirements list the name of the function, required channels, applicable MODES or other specified Conditions, and associated Conditions. This changes the CTS Table by deleting the columns for the channels to trip and the minimum channels OPERABLE. It also modifies the names for the other three columns.

This change is acceptable because it maintains the technical requirements of the CTS with the conversion to the ITS. The "channels to trip" column is information only and is not needed for the Specification as a technical requirement. The number of channels to provide a trip signal is set by the design of the ESFAS and does not change. Therefore, the elimination of the columns does not modify any technical requirement. The minimum channels OPERABLE column is not needed because the ITS Conditions provide the necessary requirements to insure the minimum channels will be maintained OPERABLE. The elimination of this column does not add or delete any technical requirement. The required channels' column incorporates the channel requirements of the instrumentation function formally provided by the CTS three columns of total number of channels, channels to trip, and minimum channels OPERABLE. This requires a function, with the reactor being operated in specific MODES or specific conditions, to have a number of channels OPERABLE. If the number of OPERABLE channels is less than the required, the ITS Condition (formally the CTS Action) must be entered. The addition of specific conditions in the

ITS that were in the CTS are made with notes, which specify modifications to Actions or applicability for a function. With these modifications to the table, it is the intent of this change to not modify any technical requirement, but rather to present the information in a more logical manner. Any technical change to a function is addressed by a separate item in this discussion of changes. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.6 CTS Table 3.3-3 for Functional Unit 3, Containment Isolation Phase 'A', states the function is initiated from safety injection automatic actuation logic, in addition to manual initiation. ITS requirement in Table 3.3.2-1 states manual, automatic 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 in ITS LCO 3.0.4, the requirement states, "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." This allows the transition into the MODES of Applicability for functions with inoperable channels, provided the Required Action for that function permits unlimited continued operation with an inoperable channel. 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. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

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 logic train such that both logic trains are tested at least once per 36 months." ITS SR 3.3.2.9 requires the verification of ESFAS RESPONSE TIMES are within limits every 18 months on a STAGGERED TEST BASIS (STB).

This change is acceptable because the testing requirements of the CTS are maintained in the ITS format. The testing of every 18 months on a STB satisfies the requirement that both trains are tested every 36 months. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

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.

A.12 CTS Table 4.3-2 notation (1) is associated with the manual initiation switches for Safety Injection, Containment Spray, Containment Isolation (Phase A and B), Steam Line Isolation, and the start of the AFW pumps. The notation requires that each actuation switch is required to be tested to actuate the required function at least once per 18 months during shutdown. In ITS Table 3.3.2-1 for each of the listed functions, the SR 3.3.2.7, a TADOT must be performed at a frequency of eighteen months. Additionally, a Note is added to SR 3.3.2.7 that specifies, "Verification of setpoint not required for manual initiation functions."

This change is acceptable because the required testing maintains the CTS requirements in the ITS format. Because of the nature of the associated functions, the required tests can only be performed during a shutdown condition, otherwise their actuation would cause a plant transient. Therefore, the need to state that the testing may only be performed during shutdown is not necessary and is eliminated. The addition of the Note to the SR simply states that setpoints for manual activation do not require the verification of setpoints. A manual activation either provides a function or not. If the function is initiated by the manual actuation, the function is satisfied, and therefore, the setpoint verification is not necessary for any manual initiation. This portion of the change does not add or delete any technical requirements of the CTS. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.13 CTS Table 4.3-2 lists the requirements for the ESFAS Interlocks P-11 and P-12. A CHANNEL FUNCTIONAL TEST (CFT) and a CHANNEL CALIBRATION must be performed for each interlock on a refueling frequency (R). ITS SRs for the P-11 and P-12 interlocks require SR 3.3.2.8 (CHANNEL CALIBRATION) to be performed every 18 months. This changes the CTS by eliminating the CHANNEL FUNCTIONAL TEST requirements.

This change is acceptable because the ITS requirements maintains the CTS technical requirements. The CHANNEL CALIBRATION requirements contain all the requirements of the CFT and therefore, performing a CHANNEL CALIBRATION will satisfy all of the technical requirements of the CFT. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.14 CTS requirements in Table 3.3–3 for ESFAS Function 3.b.1), Containment Isolation Phase B manual, state that 2 sets, 2 switches/set are the total number of channels required. This function is required to be OPERABLE in MODES 1, 2, 3, and 4 with Action 18 to be entered for an inoperable channel. ITS in Table 3.3.2-1 Function 3.b.1, Containment Isolation Phase B on Manual Initiation, states, "Refer to Function 2.a (Containment Spray – Manual Initiation) for all functions and requirements." This changes the CTS by deleting the specific requirements for the Containment Isolation Phase B manual requirements and referring the function to the Containment Spray Manual Initiation for the specific requirements.

This change is acceptable because there are no separate switches to initiate the Phase B Containment Isolation function. The Containment Spray manual switches are the only switches that initiate the Phase B Containment Isolation signal. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.15 CTS requirements in Table 3.3-3 for ESFAS Function 3.b.3, Containment Isolation Phase B Containment Pressure High-High state that 4 channels are required. The function is required to be OPERABLE in MODES 1,2,3, and 4 with Action 16* to be entered for an inoperable channel. CTS requirements in Table 3.3-3 for ESFAS Function 2.c, Containment Spray on Containment Pressure High-High state that 4 channels are required. The function is required to be OPERABLE in MODES 1,2,3, and 4 with Action 16* to be entered for an inoperable channel. ITS in Table 3.3.2-1 Function 3.b.3, Containment Isolation Phase B on Containment Pressure High High, states, "Refer to Function 2.c (Containment Spray – Containment Pressure High High) for all functions and requirements." This change the CTS by deleting the specific requirements for the Containment Isolation Phase B on Containment Pressure High High requirements and referring the function to the Containment Spray Containment Pressure High High for the specific requirements.

This change is acceptable because there are no separate signal from Containment Pressure channels to initiate the Phase B Containment Isolation function. The Containment Spray Containment Pressure High High signal is the same signal that initiates the Phase B Containment Isolation signal. The change is designated as administrative change because it does not result in technical change to the CTS requirements.

A.16 CTS Surveillance Requirements 4.3.2.1.2 requires the Engineered Safety Feature Response Time to be conducted for each ESFAS function. The testing must demonstrate that each function is within specified limit at a frequency of every 18 months. ITS ESFAS SI, Containment Spray, Containment Isolation, Steam Line Isolation, and AFW pump start Functions for manual initiation and Automatic Actuation Logic and Actuation Relays do not required that Response Time Testing (RTT) be performed. The Automatic Actuation Logic and Actuation Relays require Actuation Logic Test (SR 3.3.2.2), Master Relay Test (SR 3.3.2.3), and Slave Relay

Test (SR 3.3.2.5). Each manual initiation function requires a TADOT (SR 3.3.2.7). These are the appropriate tests for these functions. This changes the CTS requirements by not requiring RTT to be performed on the above ESFAS Functions.

The purpose of deleting the RTT for these ESFAS Functions is to set the proper testing requirements for function. These tests are the appropriate testing requirements for the ESFAS Functions. 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 Surveillance requirement 4.3.2.1.2 requires the testing of the ESFAS interlocks to determine OPERABILITY. The two interlocks P-11 and P-12 are required to be OPERABLE. No specific requirement is stated or implied to perform a CHANNEL CHECK for the interlocks. ITS SR 3.3.2.1 is added to the surveillance requirements for the P-11 and P-12 interlocks. This change modifies the CTS requirements for these interlocks and requires a CHANNEL CHECK to be performed every twelve hours.

This change is acceptable because the three pressurizer pressure channels providing the input to P-11 interlock and the three T_{ave} channels providing input to P-12 require a CHANNEL CHECK to be performed once per shift. Verification that the interlock status reflects the current plant conditions is prudent to be performed on a once per shift basis. This change is designated as more restrictive because the CTS do not currently require a CHANNEL CHECK to be performing for these functions.

M.2 CTS Surveillance requirements listed in Table 4.3-2 and Surveillance 4.3.2.1.3 for the Main Feedwater Pump Trip from the Auxiliary Feedwater (AFW) pump start (function 6.e) requires a CHANNEL FUNCTIONAL TEST and ESFAS RESPONSE TIMES test to be conducted on a refueling basis. The CTS does not require a CHANNEL CALIBRATION to be performed at any frequency. The ITS 3.3.2 Function for the start of the AFW pump on Trip of all Main Feedwater Pumps (6.e) requires the performance of SRs 3.3.2.7 (TADOT), 3.3.2.8 (CHANNEL CALIBRATION), and 3.3.2.9 (ESFAS RESPONSE TIMES) every 18 months. A Note that states, "This Surveillance shall include verification that the time constants are adjusted to the prescribed values" modifies SR 3.3.2.8. This changes the CTS by adding the requirement to perform a CHANNEL CALIBRATION every 18 months.

This change is acceptable because a complete check of the instrument loop, including the sensor, should be periodically performed to ensure the measured parameter is maintained within the necessary range and accuracy. A testing frequency of 18 months is adequate based on the magnitude of equipment drift determined by the setpoint methodology. This change is designated as more restrictive because the testing requirements have been increased from the CTS requirements.

M.3 CTS for ESF instrumentation do not require the ESFAS function for the automatic swap over of Low Head Safety Injection (LHSI) pumps suction to the containment sump from the Refueling Water Storage Tank (RWST) on a Low-Low level. ITS ESFAS Instrumentation Function 7 is labeled as the "Automatic Switchover to Containment Sump." This requires that two trains of automatic actuation logic and actuation relays to be OPERABLE in MODES 1, 2, 3, and 4. This requires Action C to be entered if a train becomes inoperable, and SRs 3.3.2.2, 3.3.2.3, and 3.3.2.5 to be performed at specific frequencies. The function requires four channels of RWST level to be OPERABLE in MODES 1, 2, 3, and 4. When two of the four channels reach the RWST Low-Low level setpoint, coincident with a SI signal, the LHSI pump suctions swap from the RWST to the containment sump. ITS Action I is required to be entered for an inoperable channel, and SRs 3.3.2.1, 3.3.2.4, 3.3.2.8, and 3.3.2.9 are required to be performed to verify OPERABILITY. ITS Action I requires an inoperable channel to be placed in bypass within 72 hours or the unit must be placed in MODE 3 within the next 6 hours and MODE 5 within the next 30 hours. A Note that allows an additional channel to be bypassed for up to 12 hours for surveillance testing modifies the Required Action. The Allowable Value for the RWST Level Low-Low is $\geq$ 18.4 % and $\leq$ 20.4% for LHSI pump swapover to the containment sump from the RWST. This changes the CTS by adding additional requirements to the CTS.

This change is acceptable because requiring the automatic switchover instrumentation to be OPERABLE is essential to ensure the LHSI pumps will perform the required safety function. Emergency procedures require the operator to manually swap the LHSI pumps from the RWST to the containment sump prior to a RWST low-low level during design basis events. The switching of the pumps is an automatic action credited by the emergency procedures. The swapover is credited in the UFSAR to ensure accident analyses assumptions are achieved. This change is designated as more restrictive because the CTS does not specifically require the automatic switchover functional channels and trains to be OPERABLE.

M.4 CTS requirements for LCO 3.3.2.1 in Table 3.3-3 for various Functions require that Action 14 be entered for an inoperable channel. This requires the inoperable channel to be placed in a blocked condition within 72 hours. If this can not be accomplished, CTS LCO 3.0.3 would require the plant to be shutdown to HOT STANDBY within the next 7 hours and HOT SHUTDOWN within the following 6 hours. ITS LCO 3.3.2 Table 3.3.2-1 for these Functions require with one channel inoperable, the channel is required to be placed in bypass within 72 hours by Required Action D.1. If this can not be accomplished, the plant is required by Required Action D.2 to be placed in MODE 3 within six hours and MODE 4 within the following six hours. This change decreases the time allowed to reach MODE 3 by one hour.

This change is acceptable because the time allowed is sufficient to reduce power of the plant in a safe and controlled manner to MODE 3 from 100% RTP. In various ITS Specifications the plant is required to achieve the same limits of power and

temperature within the same time frame. This change is designated as more restrictive because the requirements of the ITS provide one hour less than the CTS requirements allow.

M.5 CTS requirement for LCO 3.3.2.1 in Table 3.3-3 Containment Spray and Isolation Functions require that Action 16 is to be entered for an inoperable channel. This requires the inoperable channel to be placed in a blocked condition within 72 hours. If this can not be accomplished, CTS LCO 3.0.3 would require the plant to be shutdown to HOT STANDBY within the next 7 hours and HOT SHUTDOWN within the following 6 hours. ITS LCO 3.3.2 Table 3.3.2-1 for these Containment Functions require with one channel inoperable, the channel is required to be placed in bypass within 72 hours by Required Action E.1. If this can not be accomplished, the plant is required by Required Action E.2 to be placed in MODE 3 within six hours and MODE 4 within the following six hours. This change the CTS by decreases the time allowed to reach MODE 3 by one hour.

This change is acceptable because the time allowed is sufficient to reduce power of the plant in a safe and controlled manner to MODE 3 from 100% RTP. In various ITS Specifications the plant is required to achieve the same limits of power and temperature within the same time frame. This change is designated as more restrictive because the requirements of the ITS provide one hour less than the CTS requirements allow.

M.6 CTS Surveillance Requirements listed in Table 4.3-2 for the Station Blackout start for the Auxiliary Feedwater (AFW) pump (function 6.e) requires a CHANNEL CALIBRATION and ESFAS RESPONSE TIMES test to be conducted on a refueling basis. The CTS does not require a CHANNEL FUNCTIONAL TEST to be performed at any frequency. The ITS 3.3.2 Function for the start of the AFW pump on Loss of Offsite Power (6.d) requires the performance of SRs 3.3.2.8 (CHANNEL CALIBRATION) and 3.3.2.9 (ESFAS RESPONSE TIMES) every 18 months, and 3.3.2.6 (TADOT) every 92 days. The TADOT is modified by a Note that states, "Verification of relay setpoints not required." This changes the CTS by requiring the TADOT to be performed every 92 days.

This change is acceptable because the verification that the signal from the Loss of Offsite Power will start the AFW pumps should be periodically tested to ensure OPERABILITY. A testing frequency of 92 days is adequate based on industry operating experience, considering the instrument reliability and operating history. This change is designated as more restrictive because the testing requirements have been increased from the CTS requirements.

M.7 CTS requirements in Table 3.3-3 list the Allowable Values for ESFAS Functions and Interlocks. The Allowable Values for the following function are stated as: P-12 $\geq$ 541 °F, Safety Injection (SI) on Containment Pressure High $\leq$ 18.5 psia, SI on Pressurizer Pressure Low-Low $\geq$ 1755 psig, SI on Steam Flow in Two Steam Lines

Coincident with T_{ave} Low-Low or Steam Line Pressure Low ≤ a ΔP corresponding to 44% of full steam flow increasing to 111.5% at full load, Containment Spray on Containment Pressure High-High ≤ 29.25 psia, Steam Line Isolation on Containment Pressure Intermediate High-High ≤ 19.3 psia, and Steam Line Isolation on Steam Flow in Two Steam Lines Coincident with T_{ave} Low-Low or Steam Line Pressure Low ≤ a ΔP corresponding to 44% of full steam flow increasing to 111.5% at full load. ITS requirements in Table 3.3.2-1 lists the Allowable Values for the ESFAS Functions and Interlock as the following: P-12 ≥ 542 °F, SI on Containment Pressure High ≤ 17.7 psia, SI on Pressurizer Pressure Low-Low ≥ 1770 psig, SI on Steam Flow in Two Steam Lines Coincident with T_{ave} Low-Low or Steam Line Pressure Low ≤ a ΔP corresponding to 44% of full steam flow increasing to 111% at full load, Containment Spray on Containment Pressure High-High ≤ 28.45 psia, Steam Line Isolation on Containment Pressure Intermediate High-High ≤ 18.5 psia, and Steam Line Isolation on Steam Flow in Two Steam Lines Coincident with T_{ave} Low-Low or Steam Line Pressure Low ≤ a ΔP corresponding to 43% of full steam flow increasing to 111% at full load. This changes the CTS Allowable Values for these functions to more restrictive values in the ITS Allowable Values.

The purpose of these changes for the listed functions are to align the ITS Allowable Values by using a consistent setpoint methodology. These changes are acceptable because the ITS Allowable Values are consistent with the methodology used for all ESFAS Functions. These changes are designated as more restrictive because the ITS Allowable Values are more restrictive than the CTS Allowable Values.

REMOVED DETAIL CHANGES

LA.1 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.3.2.1 and Action a. contains information about the ESFAS channels and interlocks setpoint requirements. This states the setpoint will be set consistent with the Trip Setpoint 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. 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.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 changes the CTS by moving 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 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 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.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 included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the Action and Surveillance Requirements 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.5 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.3.2.1 in Table 3.3-4 for the ESFAS instrumentation trip setpoints contains information describing the bus that is monitored to detect a station blackout. ITS Table 3.3.2-1 does not contain this information. 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.6 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.3.2.1 in Table 4.3-2 for the ESFAS containment pressure instrumentation surveillance requirement contains information which states that the CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter. ITS Table 3.3.2-1 for the testing of Containment pressure requires SR 3.3.2.4 to be

performed. 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.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 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS requirement 2.2.1 lists in Table 2.2-1 for each RTS the Allowable Value and the Trip Setpoint in a column. ITS Table 3.3.2-1 includes an Allowable Value column. This changes the CTS by moving the Trip Setpoint from the Specification to the Technical Requirements Manual (TRM).

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 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 information relating to system design is being removed from the Technical Specifications.

LA.9 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Surveillance Requirement 4.3.2.1.2. requires the ENGINEERED SAFETY FEATURES RESPONSE TIME test on each ESFAS function at least once per 18 months. The requirement additionally states, "one channel per function (will be tested) 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." This changes the CTS by moving the information from the Specification to the ITS Bases.

This change 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 categorized as less restrictive removal of details because information has been moved from the Technical Specifications to the Bases.

LA.10 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Action 22 for Table 3.3-3 requires for applicable instrumentation channels that, "With the number of OPERABLE channels less than the minimum OPERABLE Channels requirement, within one hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing unit 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 conditions 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.

This change 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 categorized as less restrictive removal of details because information has been moved from the Technical Specifications to the Bases.

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 3.3.2-1 for function 2.a, Containment Spray Manual Actuation, states the channel requirements as 2 per train/2 trains. This changes the CTS by moving the information from the Specification to the ITS Bases.

This change 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 channel requirements to ensure the function remains OPERABLE. All necessary channel 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 categorized as less restrictive removal of details because information has been moved from the Technical Specifications to the Bases.

LESS RESTRICTIVE CHANGES

L.1 *(Category 1 – Relaxation of LCO Requirements)* CTS 3.3.2.1 requires the ESFAS instrumentation channels shown in Table 3.3-3 to be OPERABLE. Table 3.3-3 states for function 6(a), Auxiliary Feedwater Pump starts on manual initiation that the total number of channels is 2. The function is required to be OPERABLE in MODES 1, 2, and 3. For an inoperable channel, Action 21 must be entered. ITS 3.3.2 in Table 3.3.2-1 does not require the manual initiation function for AFW pump starts. This changes the CTS by deleting the requirements for manual initiation of AFW pump starts.

The purpose of the CTS is to require the OPERABILITY of the manual initiation of AFW. This change is acceptable because the LCO requirements continue to ensure that structures, systems, and components are maintained consistent with the safety analyses and licensing basis.. Manual initiation of AFW system is not assumed in the safety analyses. The automatic functions that would initiate AFW to provide a safety feature will continue to be required. 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.2 *(Category 2 – Relaxation of Applicability)* CTS requirement 3.3.2.1 for Steam Line Isolation, Functional Unit 4 in Table 3.3-3, requires the function to be OPERABLE with the capabilities to perform a Main Steam isolation. The isolation may be initiated from Manual, Automatic Actuation Containment Pressure – Intermediate High-High, and Steam Flow in Two Steam Lines – High coincident with either T_{ave} Low-Low or Steam Line Pressure Low. The steam line isolation functions are required to be OPERABLE in MODES 1, 2, and 3[##]. ITS LCO 3.3.2 in Table 3.3.2-1 lists the requirement for Steam Line Isolation as Function 4. This requires the function to be OPERABLE with initiation by Manual, Automatic Actuation Logic and Actuation Relays, Containment Pressure Intermediate High-High, High Steam Flow in Two Steam Lines with either T_{ave} Low-Low or Steam Line Pressure Low. These initiators are required to be OPERABLE in MODES 1, 2[(d)], and 3 [(d)]. Notation [(d)] states, "Except when all MSTVs are closed and de-activated." This changes the CTS by not requiring the instrumentation channels to be OPERABLE in MODES 2[(d)] and 3 [(d)].

The purpose of the CTS is to ensure that the referenced functions are OPERABLE. 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 analyses and licensing basis. In MODES 2 and 3, having all MSTVs closed and de-energized accomplishes the safety function of isolating the Main Steam System. Therefore, the instrumentation required to provide the safety function is not required to be OPERABLE. This change is designated as less restrictive because the LCO requirements are applicable in fewer operating conditions than in the CTS.

L.3 *(Category 7 – Relaxation Of Surveillance Frequency)* CTS SR 4.3.2.1.3 provides for the Response Time Testing (RTT) of the ESF functions. This is applicable to the steam turbine driven pump start requirement of the CTS function 6 for the automatic start requirements. The AFW pumps are required to start on Steam Generator Water Level Low – Low, Loss of Offsite Power, the Trip of all Main Feedwater Pumps, and any SI signals. ITS SR 3.3.2.9 requires the verification of RTT to be within specific limits. A Note is added to the requirement that provides an exception for the turbine driven AFW pump. The allowance delays the required verification by 24 hours after main steam pressure reaches 1005 psig. This changes the CTS by allowing the RTT verification to be delayed for 24 hours after the unit reaches a stable condition for testing.

The purpose of the CTS Surveillance Requirement is to ensure that the AFW system can provide water to the steam generator within the time frames assumed in the safety analyses. This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. The ITS allowance provides for entry into MODE 3 before testing of the steam driven AFW pump to ensure that there is sufficient steam pressure to accurately test the pump. Inconsistent results may result if testing of the turbine driven pump is

performed before establishing an appropriate steam pressure. This change is designated as less restrictive because Surveillances will be performed less frequently under the ITS than under the CTS.

UNIT 1

ITS

3.3 INSTRUMENTATION

3.3.3 ~~ACCIDENT~~ MONITORING INSTRUMENTATION (A.1)

LIMITING CONDITION FOR OPERATION

LCO 3.3.3 3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION: > Note 1

> INSERT proposed Note 2 to Actions

Action A a. With the number of OPERABLE accident monitoring channels less than the total number of channels shown in Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within ~~7~~ 30 days ~~or be in at least HOT SHUTDOWN within the next 12 hours.~~ (A.2) (L.1)

Action B > INSERT proposed Action B

Action C b. With the number of OPERABLE accident monitoring instrumentation channels less than the MINIMUM CHANNELS OPERABLE requirements of Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within ~~48 hours~~ 7 days or be in at least HOT SHUTDOWN within the next 12 hours. Mode 3 within 6 hours and (L.2)

Action D

Actions Note c. The provisions of Specification 3.0.4 are not applicable. (M.1)

SURVEILLANCE REQUIREMENTS

> INSERT Note to SR 3.3.3.3 (A.3)

SR 3.3.1 and 3.3.3.3 4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

INSTRUMENTATION

POST ACCIDENT MONITORING (PAM) INSTRUMENTATION

CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

A.1

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

LCO 3.3.3 TABLE 3.3.3-1 Item 12

3.6.4.1 Two independent containment hydrogen analyzers (shared with Unit 2) shall be OPERABLE.

LA.1

APPLICABILITY: MODES 1 and 2 (3)

M.2

ACTION: (INSERT Note 1 3.0.4 exception)

L.4

Action A

a. With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours. (INSERT proposed Action B)

A.2

L.1

Action C

Action D

b. With both hydrogen analyzers inoperable, restore at least one analyzer to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours. (AND Be in MODE 4 WITHIN 12 hours)

M.2

NOTE: OPERABILITY of the hydrogen analyzers includes OPERABILITY of the respective Heat Tracing System

LA.1

SURVEILLANCE REQUIREMENTS

SR 3.3.3.2

4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE at least once per (92 days) (18 MONTHS) on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gas containing:

L.3

a. One volume percent (±.25%) hydrogen, balance nitrogen, and

b. Four volume percent (±.25%) hydrogen, balance nitrogen.

LA.2

NOTE: The Channel Calibration Test shall include startup and operation of the Heat Tracing System.

LA.1

A.1

ITS

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

		Required TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE	
8 1	Containment Pressure	2	1	A.4
9	Containment Pressure (WIDE RANGE)	2	1	M.4
3 2.	Reactor Coolant Inlet Temperature-T_{hot} (wide range)	2	1	
4 3.	Reactor Coolant Inlet Temperature-T_{cold} (wide range)	2	1	
5 4.	Reactor Coolant Pressure-Wide Range	(2)(1)	1	M.3
13 5.	Pressurizer Water Level	(2)(1)	1	M.3
17 6.	Steam Generator Line Pressure	2/steam generator	1/steam generator	A.1
15 7.	Steam Generator Water Level-Narrow Range	2/steam generator	1/steam generator	
	8. Refueling Water Storage Tank Water Level	1	1	
	9. Boric Acid Tank Solution Level	1	1	
	10. Auxiliary Feedwater Flow Rate	1/steam generator	1/steam generator	L.5
66 11.	Reactor Coolant System Subcooling Margin Monitor	2	1	
	12. PORV Position Indicator	2/valve	1/valve	
	13. PORV Block Valve Position Indicator	1/valve	1/valve	L.5
	14. Safety Valve Position Indicator	1/valve	1/valve	A.5
6	Inadequate Core Cooling Monitoring (ICCM) System			
6a 15.	Reactor Vessel Coolant Level Monitor (Instrumentation System (RVLIS))	2	1	L.5
	16. Containment Water Level (narrow range)	2	1	M.5
7 17.	Containment Sump Water Level (wide range)	2	1	
6c 18.	In Core Thermocouples	(2)(1)/core quadrant (c)	2/core quadrant	M.4

(Insert 7)

INSert Notes (a)(b)(c) M.4 M.5

5-20-88 ITS 3.3.3

INSERT

ITS	Instrument	REQUIRED CHANNELS
1	Power Range Neutron Monitors	2
2	Source Range Neutron Monitors	2
10	Containment Isolation Valve Position Indication	2 per penetration flow path [(a)(b)]
12	Containment Hydrogen Analyzers	2
14	Steam Generator Water Level (wide range)	1 / steam generator
16	Emergency Condensate Storage Tank Level	2
18	High Head Safety Injection Flow	1 per train

A.1

ITS

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
8	1. Containment Pressure (Containment PRESSURE (WIDE RANGE))	M 3.3.3.1 A.1	R 3.3.3.3 A.1
3	2. Reactor Coolant Inlet Temperature-T_{hot} (wide range)	M	R
4	3. Reactor Coolant Inlet Temperature-T_{cold} (wide range)	M	R
5	4. Reactor Coolant Pressure-Wide Range	M	R
13	5. Pressurizer Water Level	M	R
17	6. Steam (Generator) Line Pressure	M	R A.1
15	7. Steam Generator Water Level-Narrow Range	M	R
	8. Refueling Water Storage Tank Water Level	M	R
	9. Boric Acid Tank Solution Level	M	R
	10. Auxiliary Feedwater Flow Rate	M	R L.5
6b	11. Reactor Coolant System Subcooling Margin Monitor	M 3.3.3.1 A.1	R 3.3.3.3 A.1
	12. PORV Position Indicator	M	R
	13. PORV Block Valve Position Indicator	M	R
	14. Safety Valve Position Indicator	M	R L.5
6a	15. Reactor Vessel Coolant Level Monitor	M 3.3.3.1 A.1	R 3.3.3.3 A.1
	16. Containment Water Level (narrow range) (1)	M	R L.5
7	17. Containment Water Level (wide range)	M 3.3.3.1 A.1	R 3.3.3.5 A.1
6c	18. In Core Thermocouples	M	Q

M.4

<Inset>

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Amendment No. 66, 94, 104

6-20-86

ITS 3.3.3

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INSERT

ITS	Instrument	CHANNEL CHECK	CHANNEL CALIBRATION
1	Power Range Neutron Monitors	3.3.3.1	3.3.3.3
2	Source Range Neutron Monitors	3.3.3.1	3.3.3.3
10	Containment Isolation Valve Position Indication	3.3.3.1	3.3.3.3
12	Containment Hydrogen Analyzers	3.3.3.1	3.3.3.2
14	Steam Generator Water Level (wide range)	3.3.3.1	3.3.3.3
16	Emergency Condensate Storage Tank Level	3.3.3.1	3.3.3.3
18	High Head Safety Injection Flow	3.3.3.1	3.3.3.3

ITS 3.3.3

9-13-90

A.1

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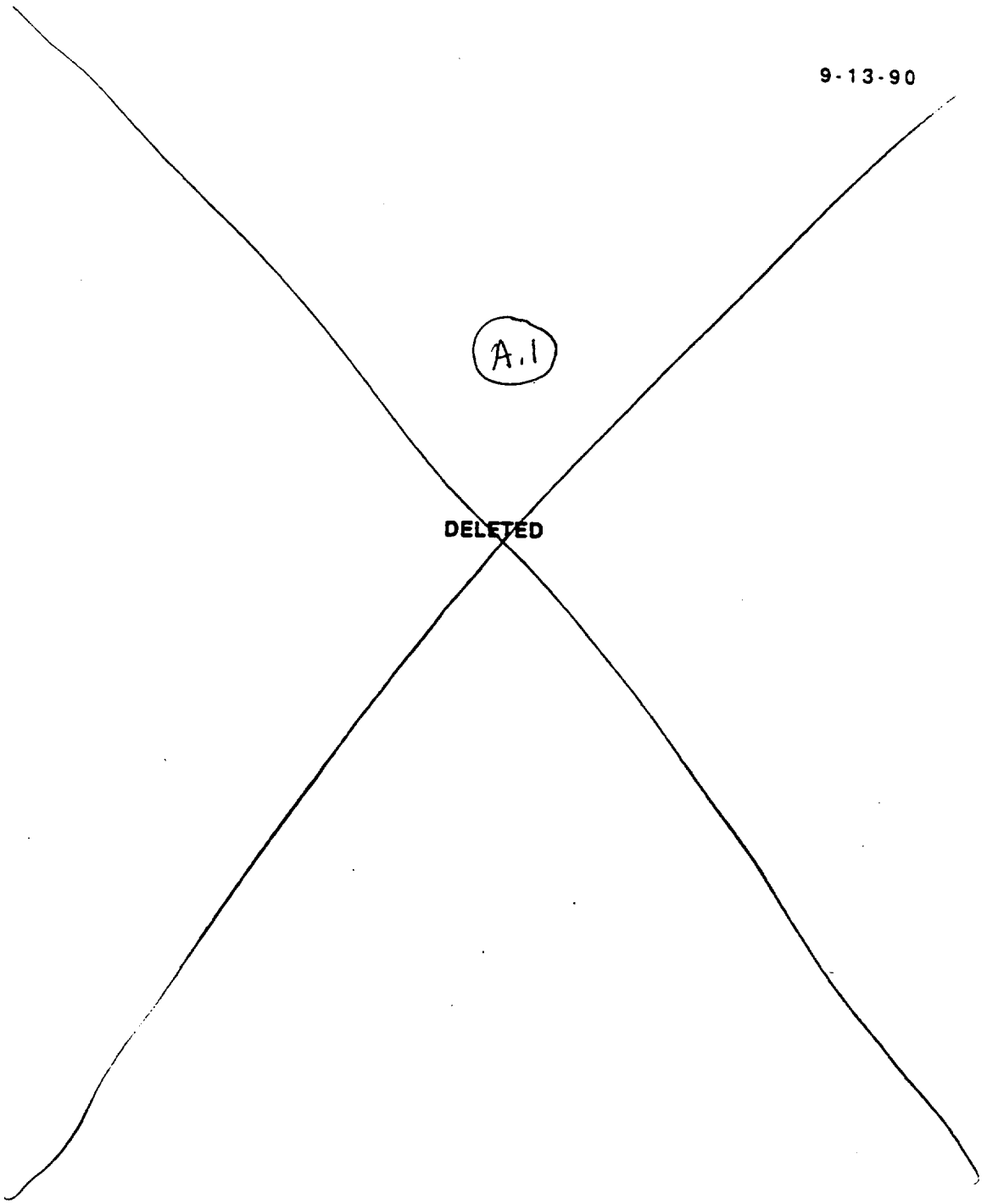

Rev 0

ITS 3.3.3

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A.1

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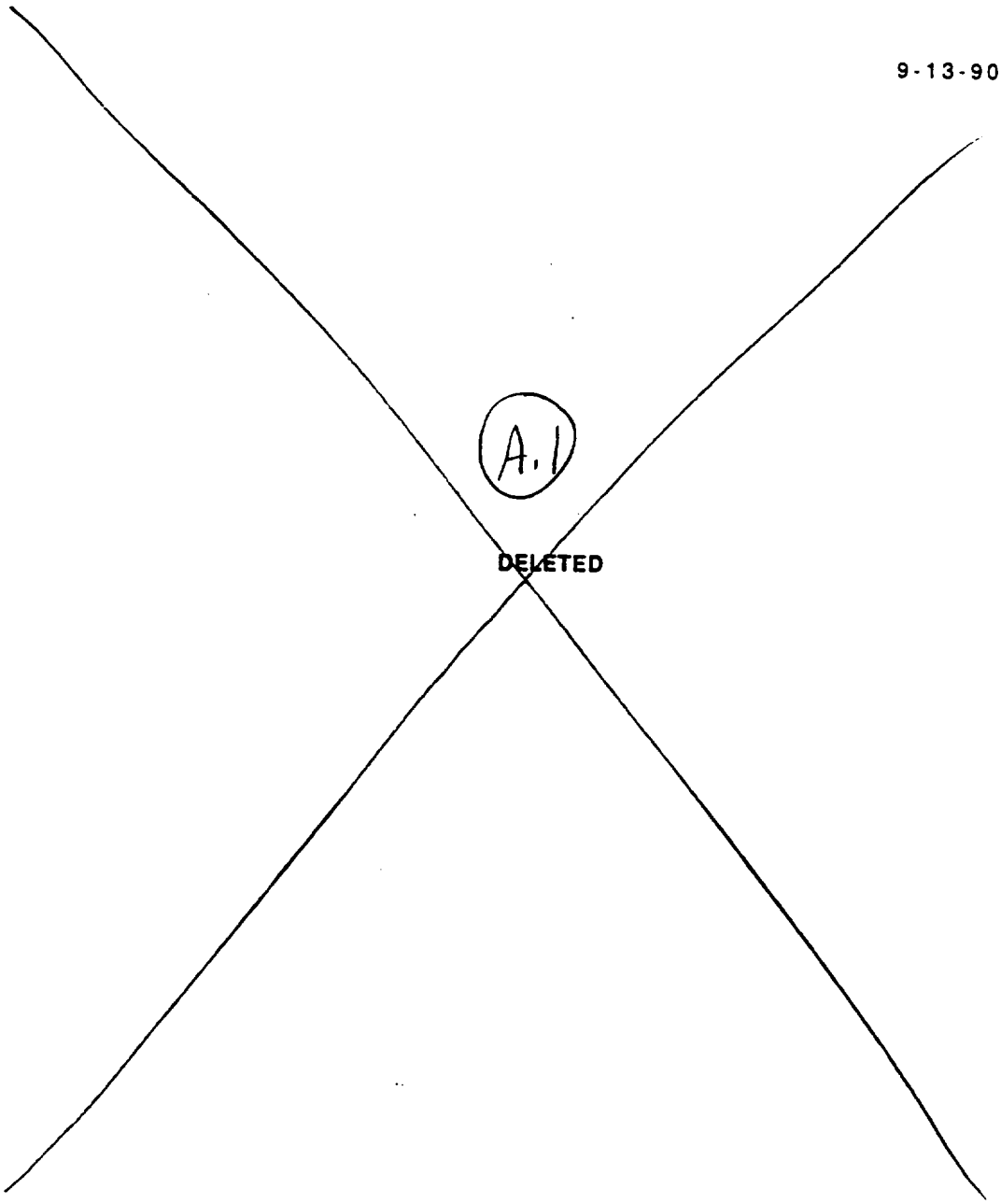
ITS 3.3.3

9-13-90



ITS 3.3.3

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A.1

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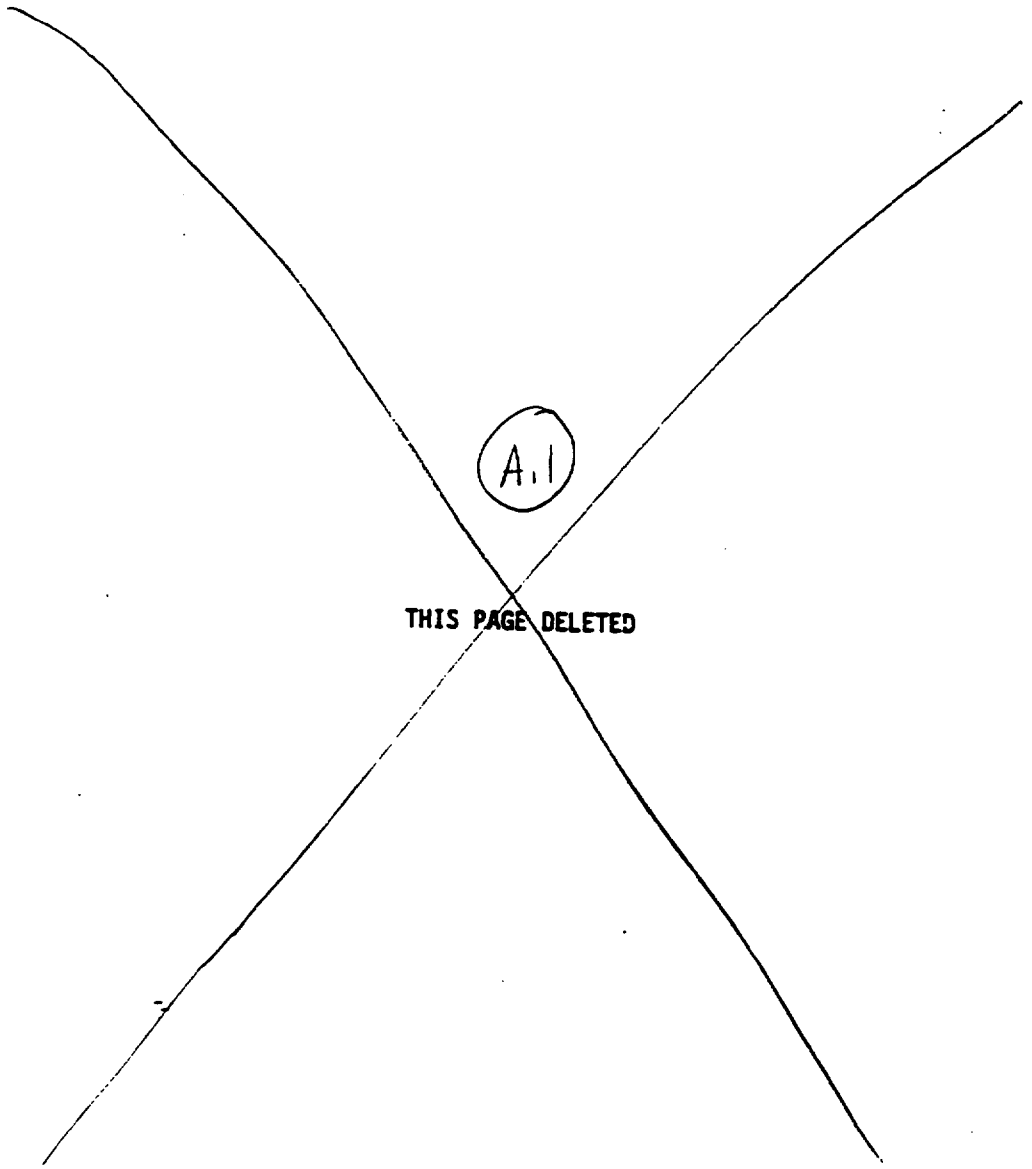

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ITS

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel Storage Pool Area					
i. Criticality Monitor #	1	*	≤ 15 mR/hr	10^{-4} - 10^{+1} R/hr	19
b. Containment					
i. Purge & Exhaust Isolation	1	6	≤ 50 mR/hr	10^{-4} - 10^{+1} R/hr	22
ii. High Range Area	2	1,2,3,&4	≤ $1.6 \times 10^{+5}$ R/hr	10^{0} - 10^{+7} R/hr	35
2. PROCESS MONITORS					
a. Ventilation Vent #					
i. Gaseous Gross Activity	1	**	≤ 1×10^{-5} µCi/ml	10 - 10^{6} cpm	21
ii. Particulate Gross Activity	1	**	≤ 2×10^{-9} µCi/ml	10 - 10^{6} cpm	21
b. Containment					
i. Gaseous Activity					
a) Purge & Exhaust Isolation	1	6	≤ 3.6×10^{3} cpm	10 - 10^{6} cpm	22
b) RCS Leakage Detection	1	1, 2, 3 & 4	N/A	10 - 10^{6} cpm	20
ii. Particulate Activity					
a) Purge & Exhaust Isolation	1	6	≤ 1×10^{5} cpm	10 - 10^{6} cpm	22
b) RCS Leakage Detection	1	1, 2, 3 & 4	N/A	10 - 10^{6} cpm	20

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool
\# Common to Unit 1 and Unit 2

Function 11

See CTS 3.3.1

L.6

See CTS 3.3.1

See ITS 3.4.15

See CTS 3.3.1

ITS 3.3.3

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ITS 3.3.3

TABLE 3.3-6 (Continued)

TABLE NOTATION

ACTION 19 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.

see CTS 3.3.3.1

ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1.

See ITS 3.4.15

ACTION 21 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

See CTS 3.3.3.1

ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.

See CTS 3.3.3.1

ACTION 35 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:

1. Either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or

2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

L.6

Proposed Conditions A and B

ITS

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TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. AREA MONITORS				
a. Fuel Storage Pool Area				
1. Criticality Monitor #	S	R	M	*
b. Containment				
1. Purge & Exhaust Isolation	S	R	M	6
ii. High Range Area	S	R	M	1, 2, 3, & 4
2. PROCESS MONITORS				
a. Ventilation Vent #				
1. Gaseous Gross Activity	S	R	M	**
ii. Particulate Gross Activity	S	R	M	**
b. Containment				
1. Gaseous Activity				
a)Purge & Exhaust Isolation	S	R	M	6
b)RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a)Purge & Exhaust Isolation	S	R	M	6
b)RCS Leakage Detection	S	R	M	1, 2, 3, & 4

*With fuel in the storage pool or building
**With irradiated fuel in the storage pool
#Common to Unit 1 and Unit 2

See CTS 3.3.3.1

See CTS 3.3.3.1

See ITS 3.4.15

See CTS 3.3.3.1

1 4.6

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ITS 3.3.3

UNIT 2

ITS

3.3 INSTRUMENTATION

3.3.3 ACCIDENT MONITORING INSTRUMENTATION

A.1

LIMITING CONDITION FOR OPERATION

LCO 3.3.3 3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION: Note 1

INSERT ~~Proposed~~ Note 2

Action A a. With the number of OPERABLE accident monitoring instrumentation channels less than the total number of channels shown in Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 3a 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

A.2

L.1

Action B INSERT proposed Action B

Action C b. With the number of OPERABLE accident monitoring instrumentation channels less than the MINIMUM CHANNELS OPERABLE requirements of Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

Action D 7 days

MODE 3 within 6 hours and

L.2

M.1

Actions Note c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

INSERT Note to SR 3.3.3.3

SR 3.3.3.1 and 3.3.3.3 4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

A.3

ITS 3.3 3.3.3

Instrumentation
Post Accident Monitoring (PAM) Instrumentation

A.1

CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

LCO 3.3.3 Table 3.3.3-1 Item 12

3.6.4.1 Two independent containment hydrogen analyzers (shared with Unit 1) shall be OPERABLE. LA.1

APPLICABILITY: MODES 1 and (2) (3)

M.2

ACTION: INSERT PROPOSED Note 1

INSERT PROPOSED Note 2

L.4

Action A

a. With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours

A.2

L.1

Action B

Action C

(INSert proposed Action B)

b. With both hydrogen analyzers inoperable, restore at least one analyzer to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and be in Mode 4 within 12 hours

Action D

M.2

NOTE: OPERABILITY of the hydrogen analyzers includes OPERABILITY of the respective Heat Tracing System.

LA.1

SURVEILLANCE REQUIREMENTS

SR 3.3.3.2

4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE at least once per 92 days (6 months) on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gas containing:

L.3

a. One volume percent (± .25%) hydrogen, balance nitrogen, and

b. Four volume percent (± .25%) hydrogen, balance nitrogen.

LA.2

NOTE: The Channel Calibration test shall include startup and operation of the Heat Tracing System.

LA.1

A.1

TABLE 3.3-10

POST ACCIDENT MONITORING INSTRUMENTATION

ITS

		TOTAL NO. OF CHANNELS (Required)	MINIMUM CHANNELS OPERABLE	
8	1. Containment Pressure	2	1	A.4
9	Containment PRESSURE WIDE RANGE	2	1	M.4
3	2. Reactor Coolant Outlet Temperature-T_{hot} (wide range)	2	1	
4	3. Reactor Coolant Inlet Temperature-T_{cold} (wide range)	2	1	
5	4. Reactor Coolant Pressure-Wide Range	2	1	M.3
13	5. Pressurizer Water Level	2	1	
17	6. Steam (Generator) Line Pressure	2/steam generator	1/steam generator	A.1
15	7. Steam Generator Water Level-Narrow Range	2/steam generator	1/steam generator	
	8. Refueling Water Storage Tank Water Level	1	1	
	9. Boric Acid Tank Solution Level	1	1	
	10. Auxiliary Feedwater Flow Rate	1/steam generator	1/steam generator	L.5
6b	11. Reactor Coolant System Subcooling Margin Monitor	2	1	
	12. PORV Position Indicator	2/valve	1/valve	
	13. PORV Block Valve Position Indicator	1/valve	1/valve	L.5
6c	14. Safety Valve Position Indicator (Inadequate Core Cooling Monitoring System)	1/valve	1/valve	
6a	15. Reactor Vessel (Coolant) Level Monitor (Instrumentation System (RVLIS))	2	1	A.5
	16. Containment Water Level (narrow range)	2	1	L.5
7	17. Containment Water Level (wide range)	2	1	
6c	18. In Core Thermocouples	(2)/core quadrant (c1)	2/core quadrant	M.5

M.4

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INSERT Notes (A)(B)(C) (M.4) (M.5)

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<Insert>

ITS 3.3.3

INSERT

ITS	Instrument	REQUIRED CHANNELS
1	Power Range Neutron Monitors	2
2	Source Range Neutron Monitors	2
10	Containment Isolation Valve Position Indication	2 per penetration flow path [(a)(b)]
12	Containment Hydrogen Analyzers	2
14	Steam Generator Water Level (wide range)	1 / steam generator
16	Emergency Condensate Storage Tank Level	2
18	High Head Safety Injection Flow	1 per train

A.1

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

ITS

		INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
8	1.	Containment Pressure (WIDE RANGE)	M (3.3.3.1, A.1)	R (3.3.3.3, A.1)
3	2.	Reactor Coolant Outlet Temperature-T_{hot} (wide range)	M	R
4	3.	Reactor Coolant Inlet Temperature-T_{cold} (wide range)	M	R
5	4.	Reactor Coolant Pressure-Wide Range	M	R
13	5.	Pressurizer Water Level	M	R
17	6.	Steam Line Pressure	M	R
15	7.	Steam Generator Water Level-Narrow Range	M	R
	8.	Refueling Water Storage Tank Water Level	M	R
	9.	Boric Acid Tank Solution Level	M	R
	10.	Auxiliary Feedwater Flow Rate	M	R (L.5)
66	11.	Reactor Coolant System Subcooling Margin Monitor	M (3.3.3.1, A.1)	R (3.3.3.3, A.1)
	12.	PORV Position Indicator	M	R (L.5)
	13.	PORV Block Valve Position Indicator	M	R (L.5)
6	14.	Safety Valve Position Indicator (ICCM SYSTEM)	M	R (L.5)
6a	15.	Reactor Vessel Coolant Level Monitor	M (3.3.3.1, A.1)	R (3.3.3.3, A.1)
	16.	Containment Water Level (narrow range)	M	R (L.5)
7	17.	Containment Water Level (wide range)	M (3.3.3.1, A.1)	R (3.3.3.3, A.1)
6C	18.	In Core Thermocouples	M	R

M.4

<Insert>

INSERT

ITS	Instrument	CHANNEL CHECK	CHANNEL CALIBRATION
1	Power Range Neutron Monitors	3.3.3.1	3.3.3.3
2	Source Range Neutron Monitors	3.3.3.1	3.3.3.3
10	Containment Isolation Valve Position Indication	3.3.3.1	3.3.3.3
12	Containment Hydrogen Analyzers	3.3.3.1	3.3.3.2
14	Steam Generator Water Level (wide range)	3.3.3.1	3.3.3.3
16	Emergency Condensate Storage Tank Level	3.3.3.1	3.3.3.3
18	High Head Safety Injection Flow	3.3.3.1	3.3.3.3

ITS 3.3.3

9-13-90

A.1

Pages 3-49, 3-50, and 3-50a
Have Been Deleted

ITS 3.3.3

7-19-90

A.1

Specifications 3.3.3.9 and 3.3.3.10 have been deleted.

3.3.3.10 has been changed to 3.3.3.11

ITS

Function 11

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TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel storage Pool Area Criticality Monitor #	1	*	≤ 15 mR/hr	10^{-4} - 10^{+1} R/hr	22
b. Containment					
i. Purge & Exhaust Isolation	1	6	≤ 50 mR/hr	10^{-4} - 10^{+1} R/hr	25
ii. High Range Area	2	1,2,3, & 4	≤ $1.6 \times 10^{+3}$ R/hr	10^{0} - 10^{+7} R/hr	35
2. PROCESS MONITORS					
a. Ventilation Vent #					
i. Gaseous Gross Activity	1	**	≤ 1×10^{-5} μCi/ml	10 - 10^{6} cpm	24
ii. Particulate Gross Activity	1	**	≤ 2×10^{-9} μCi/ml	10 - 10^{6} cpm	24
b. Containment					
i. Gaseous Activity					
a) Purge & Exhaust Isolation	1	6	≤ 3.6×10^{3} cpm	10 - 10^{6} cpm	25
b) RCS Leakage Detection	1	1,2,3, & 4	N/A	10 - 10^{6} cpm	23
ii. Particulate Activity					
a) Purge & Exhaust Isolation	1	6	≤ 1×10^{5} cpm	10 - 10^{6} cpm	25
b) RCS Leakage Detection	1	1,2,3, & 4	N/A	10 - 10^{6} cpm	23

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool
# Common to Unit 1 and Unit 2

See CTS 3.3.3.1

L.6

See CTS 3.3.3.1

See ITS 3.4.15 6-28-85

ITS 3.3.3

See CTS 3.3.3.1

ITS 3.3.3

TABLE 3.3-6 (Continued)

TABLE NOTATION

ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours. (see CTS 3.3.3.1)

ACTION 23 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1. (see ITS 3.4.15)

ACTION 24 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12. (See CTS 3.3.3.1)

ACTION 25 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9. (see CTS 3.3.3.1)

ACTION 35 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:

1. Either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or

2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

Proposed Conditions A and B

L.6

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FUNCTION 11

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TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. AREA MONITORS				
a. Fuel Storage Pool Area Criticality Monitor #	S	R	M	*
b. Containment				
i. Purge & Exhaust Isolation	S	R	M	6
ii. High Range Area	S	R	M	1, 2, 3, & 4
2. PROCESS MONITORS				
a. Ventilation Vent #				
i. Gaseous Gross Activity	S	R	M	**
ii. Particulate Gross Activity	S	R	M	**
b. Containment				
i. Gaseous Activity				
a) Purge & Exhaust Isolation	S	R	M	6
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) Purge & Exhaust Isolation	S	R	M	6
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool
# Common to Unit 1 and Unit 2

See CTS 3.3.3.1

L.6

See CTS 3.3.3.1

See ITS 3.4.15

See CTS 3.3.3.1

6-28-85

ITS 3.3.3

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 and are acceptable because they do not result in technical changes to the CTS.

A.2 CTS LCO 3.3.3.6 states the PAM instrumentation channels listed in Table 3.3-10 shall be OPERABLE. ITS 3.3.3 states the PAM instrumentation for each function shall be OPERABLE. Each Function is listed in Table 3.3.3 – 1. Note 2 to the Actions states, "Separate Condition entry is allowed for each Function." This changes the CTS by adding Note 2 to the CTS requirements.

The purpose for adding the Note to the Actions is to provide a clear understanding that each function is independent. Each function requires a parameter to be available for the operator to monitor during post accident conditions. This change is acceptable because the CTS is constructed to provide for separate entry into the Actions for each PAM function and the addition of the ITS Note clarifies the requirements. This change is designated as administrative because it does not result in a technical change to the CTS.

A.3 CTS SR 4.3.3.6 in Table 4.3-7 requires each PAM instrumentation channel to be demonstrated OPERABLE by the performance of a CHANNEL CALIBRATION on a refueling frequency. ITS SR 3.3.3.2 requires a CHANNEL CALIBRATION be performed on each PAM instrumentation function shown in Table 3.3.3-1, at a Frequency of eighteen months. A Note modifies the SR that excludes neutron detectors from CHANNEL CALIBRATIONS. This changes the CTS by adding a clarifying Note.

The purpose of the Note is to exclude neutron detectors from the requirement because of the impracticality of this test on this device type. CTS requirement 4.3.1.1.1 states each reactor trip instrumentation channel will have a CHANNEL CALIBRATION performed in accordance with Table 4.3-1. Note (6) to the table applies to all nuclear instrumentation required for power operation. This states, "Neutron detectors may be excluded from CHANNEL CALIBRATION." Therefore, the inclusion of the Note is acceptable because this requirement parallels the requirements of the CTS for calibration of all other nuclear instrumentation channels. This change is designated as administrative because it does not result in a technical change to the CTS.

A.4 CTS 3.3.3.6 Table 3.3-10 lists in two columns the requirements for accident monitoring instrumentation. These columns are labeled as, "Total No. of Channels"

and "Minimum Channels OPERABLE." The CTS provides Actions stated as part of the LCO. ITS 3.3.3 Table 3.3.3-1 states the requirements for PAM Instrumentation in one column labeled "Required Channels." This changes the CTS by deleting the minimum channels OPERABLE column.

The change is acceptable because the technical requirements of the CTS columns and Actions are incorporated in the ITS technical requirements. Any technical changes for the individual functions are addressed by other discussion of changes. This change is designated as administrative because it does not result in a technical change to the CTS.

A.5 CTS 3.3.3.6 Table 3.3-10 lists the functions of Reactor Vessel Coolant Level Monitor, In Core Thermocouples, and Reactor Coolant System Subcooling Margin Monitor as required accident monitoring instruments. ITS 3.3.3 Table 3.3.3-1 groups these instruments under the Inadequate Core Cooling Monitor as subsystems. This changes the CTS by the regrouping PAM functions.

This change is acceptable because the technical requirements remain unchanged. The incorporation of the functions under the system of inadequate core cooling does not change the instrument requirements. This change is designated as administrative because it does not result in a technical change to the CTS.

MORE RESTRICTIVE CHANGES

M.1 CTS 3.3.3.6 Action b states that with the number of OPERABLE accident monitoring instrumentation channels less than the minimum channels OPERABLE requirements of Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours. ITS 3.3.3 Action C states, "One or more Functions with two required channels inoperable, restore one channel to OPERABLE status within 7 days." If this is not accomplished, ITS Action D states, "Required Action and associated Completion Time of Condition C not met, be in MODE 3 in 6 hours and MODE 4 within 12 hours." This changes the CTS requirement by requiring the unit to be in MODE 3 within 6 hours.

This change is acceptable because 6 hours is a reasonable period of time for the operator to safely decrease power from 100 % RTP to MODE 3 without challenging unit systems. This Completion Time is consistent with other ITS requirements that specify a unit power reduction to MODE 3. The change is designated as more restrictive because it adds a requirement to place the unit in MODE 3 within 6 hours to the CTS.

M.2 CTS LCO 3.6.4.1, hydrogen analyzers, is applicable in MODES 1 and 2. CTS 3.6.4.1 Action b states if both hydrogen analyzers are inoperable for more than forty-eight hours, the unit must be placed in HOT STANDBY within the next six hours. ITS 3.3.3 is applicable in MODES 1, 2, and 3. ITS Action D states if two hydrogen

analyzers are inoperable for greater than seven days, the unit to be placed in MODE 3 within six hours and MODE 4 within twelve hours. This changes the CTS requirements for the hydrogen analyzers from MODES 1 and 2 to MODES 1, 2, and 3 and the Required Actions from being in MODE 3 to being in MODE 4.

This change is acceptable because the potential for hydrogen generation in the Reactor Coolant System in MODE 3 can be the same as MODES 1 and 2. The only effect on hydrogen concentration as assumed in the accident analyses that changes for MODE 3 is the potential amount of hydrogen generated from fuel clad damage. Therefore, the expansion of the Applicability to MODE 3 and the requirement to place the unit into MODE 4 if the analyzers are inoperable is appropriate. The change is designated as more restrictive because the hydrogen analyzers are required to be OPERABLE in more condition that required in the CTS.

M.3 CTS 3.3.6, Table 3.3-10, Functions 4 and 5, require one channel for the reactor coolant pressure-wide range and pressurizer water level functions. ITS 3.3.3, Table 3.3.3-1, Functions 5 and 12 require two channels for RCS Pressure (Wide Range) and Pressurizer Level. This changes the CTS requirements for the parameters from one to two required channels.

This change is acceptable because the ITS reflects the requirements for diversity and redundancy stated in Regulatory Guide 1.97 and Generic Letters 82-33 and 83-37. Additionally, the unit specific evaluation requires that a minimum of two channels be available for these parameters. This provides the operator an unambiguous source of information for decisions needed following design basis events. The change is designated as a more restrictive because the number of required channels for the indicated parameters is increased from one to two.

M.4 CTS 3.3.6 Table 3.3-10 does not require OPERABLE indication channels for the parameters of nuclear instrumentation, containment pressure (wide range), containment isolation valve position, containment area radiation levels, wide range steam generator level, the inventory of water to supply AFW pumps, and high pressure Safety Injection flow. These are added to the CTS and shown in ITS 3.3.3, Table 3.3.3-1, Functions 1, 2, 9, 10, 14, 16, and 18. The Gammametric Power and Source range channels (Functions 1 and 2) provide nuclear instrumentation indication, with two channels of each range. Two channels provide wide range containment pressure (Function 9). Containment isolation valve position indication (Function 10) is required for each of two valves per penetration flow path. This requirement is modified by a note that requires only one position indication channel per penetration flow path with one installed channel located in the Control Room. Steam generator level is additionally monitored by wide range indication (Function 14). The last two requirements are added for two channels of Emergency Condensate Storage Tank level (Function 16) and two indications for the High Head Safety Injection flow (Function 18). In addition, SRs are added for each function. Two Notes modify the requirements for Function 9, Containment Isolation Valve Position.

Note (a) states, "Not required for isolation valves whose associated penetration is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured." Note (b) states, "Only on position indication channel is required for penetration flow paths with only one installed control room indication channel." This changes the CTS by adding new functions, Notes, and SRs.

This change is acceptable because a plant specific evaluation has concluded that these instrumentation channels are required to provide unambiguous information to the operator in order to perform manual actions for which no automatic controls exist. The information provided by these additional instrumentation channels is essential for the accomplishment of specified safety functions by the Control Room operator after a design basis event. The change is designated as more restrictive because seven new instrumentation functions are added to the Technical Specifications.

M.5 CTS 3.3.6, Table 3.3-10, Function 18 states the total number of channels required for the In Core Thermocouples (T/Cs) as four per core quadrant. ITS 3.3.3, Table 3.3.3-1, Function 6.c for Core Exit Temperature, states the required number of channels as two per quadrant. ITS Note c requires a channel to consist of two T/Cs. This changes the CTS to require two T/Cs be powered from one train and the other two T/Cs be powered from the other train. This changes the CTS by requiring two trains of T/Cs.

This change is acceptable because it provides the necessary redundancy and diversity for the Core Exit Thermocouples required for compliance with Regulatory Guide 1.97 and NUREG 0737 Item II.F.2. Adding this requirement will provide an unambiguous source of information to the operator on core radial temperature distribution. The change is designated as a more restrictive because the OPERABILITY requirements on the Core Exit Thermocouples channels have been increased.

REMOVED DETAIL CHANGES

LA.1 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS LCO 3.6.4.1 states two independent containment hydrogen analyzers (shared with the other unit) shall be OPERABLE. Notes to CTS 3.6.4.1 Actions and Surveillance Requirement 4.6 4.1 requires the OPERABILITY of the hydrogen analyzers to include the OPERABILITY of the associated heat tracing system. ITS 3.3.3 PAM Instrumentation requires two channels of hydrogen analyzers to be OPERABLE. This change moves CTS information regarding the hydrogen analyzer heat tracing system and the sharing of the function between units 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 requirement for the Hydrogen Analyzers to

be OPERABLE in the required MODES. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.2 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS SR 4.6.4.1 states each hydrogen analyzer shall be demonstrated OPERABLE by performing a CHANNEL CALIBRATION using a sample gas containing a specified gas concentration for hydrogen mixed with nitrogen. ITS SR 3.3.3.2 requires the hydrogen analyzers have a CHANNEL CALIBRATION. This change moves the CTS sample gas requirements to the ITS Bases.

The removal of these details for performing Surveillances 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 requirement for the Hydrogen Analyzers to be OPERABLE in the required MODES. Also, this change is acceptable because these types of procedural details 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 procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LESS RESTRICTIVE CHANGES

L.1 *(Category 3 – Relaxation of Completion Time)* CTS 3.3.3.6 Action a requires the restoration of PAM instrumentation channels within seven days whenever one required channel is inoperable or the unit to be shutdown within the next 12 hours. CTS 3.6.4.1 ACTION a requires the restoration of an inoperable hydrogen analyzer within thirty days with one analyzer inoperable. ITS 3.3.3 Conditions A and B require the restoration of post accident instrumentation channels within thirty days or the initiation of a special report. This changes the CTS by allowing an additional restoration time and by deleting the requirements for the unit to be in HOT SHUTDOWN within the next 12 hours with one inoperable channel for a Function that has two required channels.

This change is acceptable because the Completion Time is consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low

probability of a DBA occurring during the allowed Completion Time. The allowance to extend the Completion Time from 7 to 30 days is acceptable because of the instrumentation redundancy provided by other functions, which monitor similar parameters. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the CTS.

L.2 *(Category 3 – Relaxation of Completion Time)* CTS 3.3.3.6 Action b requires the restoration of inoperable PAM instrumentation channels within forty-eight hours whenever both required channels for a Function are inoperable. CTS 3.6.4.1 Action b. allows 7 days to restore one hydrogen analyzer to OPERABLE status when both are inoperable. ITS 3.3.3 Condition C requires the restoration of inoperable PAM instrumentation channels within seven days. This changes the CTS by allowing an additional five days for restoration of an inoperable instrumentation channel for a Function that has two inoperable channels.

This change is acceptable because the Completion Time is consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the allowed Completion Time. This change is acceptable based on the low probability of an event requiring an inoperable PAM instrument during the interval and the alternative means available for the operator to obtain the required information. This change is designated as less restrictive because additional time is allowed to restore parameters to within the LCO limits than was allowed in the CTS.

L.3 *(Category 5 – Deletion of Surveillance Requirement)* CTS SR 4.6.4.1 states, in part, "Each hydrogen analyzer shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION." ITS SR 3.3.3.2 states a CHANNEL CALIBRATION must be performed at a frequency of every six months. This changes the CTS for the hydrogen analyzer by eliminating the STAGGERED TEST BASIS (STB) requirement.

This change is acceptable because the deleted Surveillance Requirement is not necessary to verify that the equipment used to meet the LCO can perform its required functions. Thus, appropriate equipment continues to be tested in a manner and at a frequency necessary to give confidence that the equipment can perform its assumed safety function. The change does not affect the hydrogen analyzer methods of testing or the capability of the instruments to perform their safety function. This change is designated as less restrictive because Surveillances which are required in the CTS will not be required in the ITS.

L.4 *(Category 4 – Relaxation of Required Action)* CTS 3.6.4.1 requires the hydrogen analyzers to be OPERABLE and does not allow the unit to go up in MODES with less than two analyzers OPERABLE. ITS LCO 3.3.3 combines all PAM requirements

including the hydrogen analyzers and allows the unit to go up in MODES with less than two analyzers OPERABLE. This changes the CTS by adding an exception to LCO 3.0.4 for the hydrogen analyzers.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the repair period. This change is acceptable because the Actions of ITS 3.3.3 provide appropriate Required Actions and Completion Times to govern the inoperability of hydrogen analyzer channels. This change is designated as less restrictive because less stringent Required Actions are applied in the ITS than are applied in the CTS.

L.5 *(Category 1 – Relaxation of LCO Requirements)* CTS 3.3.3.6 in Table 3.3-10 requires the following functions to be OPERABLE: 8) Refueling Water Storage Tank, 9) Boric Acid Tank Solution Level, 10) Auxiliary Feedwater Flow Rate, 12) PORV Position Indicator, 13) PORV Block Valve Position Indication, 14) Safety Valve Position Indication, and 16) Containment Water Level. ITS 3.3.3 does not require these functions to be OPERABLE. This changes the CTS by deleting these functions from the post accident monitoring functions.

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 ITS LCO requirements ensure that the process variables are maintained consistent with the safety analyses and Regulatory Guide 1.97. An evaluation has been performed under the required guidelines which found that these variables are not required to be included in this table. 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.6 *(Category 1 – Relaxation of LCO Requirements)* CTS Table 3.3-6 requires 2 channels of the Containment High Range Area Monitors to be OPERABLE in MODES 1, 2, 3, and 4 with a specified alarm setpoint and measuring range. CTS Table 4.3-6 specifies Surveillance Requirements for the Containment High Range Area Monitors as a once per shift CHANNEL CHECK, a monthly CHANNEL FUNCTIONAL TEST, and a refueling interval CHANNEL CALIBRATION. Table 3.3-6 specifies Action 35 is to be taken when a channel is inoperable. This action requires inoperable channels to be returned to OPERABLE within 7 days or submit a special report. ITS LCO 3.3.3 Function 11, Containment Area Radiation (High Range), requires 2 channels to be OPERABLE in MODES 1, 2, and 3. The ITS includes Surveillance requirements for a CHANNEL CHECK to be performed once per shift and a CHANNEL

CALIBRATION to be performed every 18 months. ITS Condition A allows one channel to be inoperable for a period of 30 days before a report is required. ITS Condition B required with 2 channels inoperable that one channel must be restored to OPERABLE status within 7 days or the plant must be shutdown. This changes the CTS by requiring the Containment High Range Area Monitors to be OPERABLE only in MODES 1, 2, and 3, modifies the Required Actions to be taken with one or two inoperable channels, and requires fewer Surveillance Requirements.

The purpose of ITS 3.3.3 requirements for the Containment High Range Area Monitors is to provide consistent requirements for all PAM instrumentation channels. 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. Containment High Range Area Monitors will only be required to be OPERABLE in MODES 1, 2, and 3. A monthly CHANNEL FUNCTIONAL TEST will no longer be required and the Required Actions for inoperable channels are modified. Although, Required Actions of ITS Condition B provide for a unit shutdown that the CTS does not require, the overall effect of the ITS Required Actions are less restrictive that the CTS Action. These changes are consistent with other Post Accident Monitoring channels and ensure that all required channels are capable of providing the operator with the assumed monitoring functions. This change is designated as less restrictive because less stringent LCO requirements are being applied in the ITS than were applied in the CTS.

UNIT 1

A.1

11-26-77

ITS

3.3 INSTRUMENTATION

3.3.4 AUXILIARY SHUTDOWN PANEL MONTIORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

LCO 3.3.4

3.3.3.5 The auxiliary shutdown panel monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE with readouts displayed external to the control room. (M.2) (LA.1)

APPLICABILITY: MODES 1, 2 and 3. (A.2)

Note 2 ACTION: (INSERT PROPOSED Note 2)

Action A a. With the number of OPERABLE auxiliary shutdown panel monitoring channels less than required by Table 3.3-9, either restore the inoperable channel to OPERABLE status within 30 days, or

Action B be in HOT SHUTDOWN within the next 12 hours. (INSERT PROPOSED Required Action B.1) (M.1)

Note 1 b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

SR 3.3.4.1 3.3.4.3

4.3.3.5 Each auxiliary shutdown panel monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

A.1

8-2-89

TABLE 3.3-9

AUXILIARY SHUTDOWN PANEL MONITORING INSTRUMENTATION

ITS

	INSTRUMENT	MEASUREMENT RANGE	MINIMUM CHANNELS OPERABLE	
3a	1. Reactor Coolant Temperature - Average	530 - 630°F	1	LA.2
2a	2. Pressurizer Pressure	1700 - 2500 psig	1	
4a	3. Pressurizer Level	0 - 100%	1	LA 1
3f	4. Auxiliary Feed Pump Discharge Header Pressure	500 - 1500 psig	1	
3g	5. Emergency Condensate Storage Tank Level	0 - 100%	1	
4b	6. Charging Flow	0 - 180 gpm	1	
3c	7. S/G Main Steam Line Pressure	0 - 1400 psig	1	
3d	8. Steam Generator Level	0 - 100%	1	
	9. Relay Room Positive Ventilation	0 - 0.50 inches H_2O	1	L.1
1a	Boric Acid Pump Controls		1	
2b	Pressurizer Heater Controls		1	
3b	AFW Pump and Valve Controls		1	M.2
3e	SG PORV Controls		1 per SG	
4b	Charging Pump Controls		1	
	*Located at Elevation 254' in the Emergency Switchgear and Relay Room.			LA 1

A.1

TABLE 4.3-6

AUXILIARY SHUTDOWN PANEL MONITORING INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

ITS

	INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
3a	1. Reactor Coolant Temperature - Average	M	R
2a	2. Pressurizer Pressure	M	R
4a	3. Pressurizer Level	M	R
3f	4. Auxiliary Feed Pump Discharge Header Pressure	M	R
3g	5. Emergency Condensate Storage Tank Level	M	R
4b	6. Charging Flow	M	R
3c	7. Main Steam Line Pressure (5/6)	M	R
3d	8. Steam Generator Level	M	R
	9. Relay Room Positive Ventilation	M	R

LA.2

A.1

L.1

SR 3.3.4.1

SR 3.3.4.3

A.1

1a	Boric Acid Pump Controls	SR 3.3.4.2
2b	Pressurizer Heater Controls	SR 3.3.4.2
3b	AFW Pump and Value Controls	SR 3.3.4.2
3e	SG PorV Controls	SR 3.3.4.2
4b	Charging Pump Controls	SR 3.3.4.2

M.2

UNIT 2

ITS 3.3.4

8-21-80

A.1

ITS 3.3

3.3.4

INSTRUMENTATION

AUXILIARY SHUTDOWN PANEL MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

LCO 3.3.4

3.3.3.5 The auxiliary shutdown panel monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE ~~with readouts displayed external to the control room.~~

M.2

LA.1

APPLICABILITY: MODES 1, 2 and 3.

Note 2

ACTION: INSERT PROPOSED Note 2

A.2

Action A

a. With the number of OPERABLE auxiliary shutdown panel monitoring channels less than required by Table 3.3-9, either restore the inoperable channel(s) to OPERABLE status within ~~7~~ 30 days, or be in HOT SHUTDOWN within the next 12 hours. INSERT Proposed Required Action B.1

L.2

M.1

Action B

b. The provisions of Specification 3.0.4 are not applicable.

Note 1

SURVEILLANCE REQUIREMENTS

SR 3.3.4.1 3.3.4.3

4.3.3.5 Each auxiliary shutdown panel monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

ITS 3.3.4

A.1

8-2-89

TABLE 3.3-9

AUXILIARY SHUTDOWN PANEL MONITORING INSTRUMENTATION

ITS

	INSTRUMENT	MEASUREMENT RANGE	MINIMUM CHANNELS OPERABLE	
3a	1. Reactor Coolant Temperature - Average	530 - 630°F	1	LA.2
2a	2. Pressurizer Pressure	1700 - 2500 psig	1	
4a	3. Pressurizer Level	0 - 100%	1	LA.1
3f	4. Auxiliary Feed Pump Discharge Header Pressure	500 - 1500 psig	1	
3g	5. Emergency Condensate Storage Tank Level	0 - 100%	1	
4b	6. Charging Flow	0 - 180 gpm	1	
3c	7. Main Steam Line Pressure (5/6)	0 - 1400 psig	1	
3d	8. Steam Generator Level	0 - 100%	1	
	9. Relay Room Positive Ventilation	0 - 0.50 inches H_2O	1	L.1
1a	Boric Acid Pump Controls		1	M.2
2b	Pressurizer Heaters Controls		1	
3b	AFW Pump and Valve Controls		1	
3c	SG PORVs Controls		1/SG	
4b	Charging Pump Controls		1	
	*Located at Elevation 254' in the Emergency Switchgear and Relay Room.			LA.1

ITS 3.3.4

8-2-89

A.1

TABLE 4.3-6

AUXILIARY SHUTDOWN PANEL MONITORING INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

ITS

	INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
2a	1. Reactor Coolant Temperature - Average	M	R
1a	2. Pressurizer Pressure	M	R
3a	3. Pressurizer Level	M	R
2c	4. Auxiliary Feed Pump Discharge Header Pressure	M	R
2b	5. Emergency Condensate Storage Tank Level	M	R
3b	6. Charging Flow	M	R
2c	7. Main Steam Line (S/G) Pressure	M	R
2d	8. Steam Generator Level	M	R
	9. Relay Room Positive Ventilation	M	R

LA.2

A.1

L.1

SR 3.3.4.1

SR 3.3.4.2

A.1

1b	Boric Acid Pump Controls	SR 3.3.4.2
2b	Pressurizer Heater Controls	SR 3.3.4.2
3b	AFW Pump and Valve Controls	SR 3.3.4.2
3e	SG PORV Controls	SR 3.3.4.2
4b	Charging Pump Controls	SR 3.3.4.2

M.2

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 and are acceptable because they do not result in technical changes to the CTS.

A.2 CTS 3.3.3.5 requirements for the auxiliary shutdown panel monitoring instrumentation channels state that the functions in Table 3.3-9 shall be OPERABLE. ITS LCO 3.3.4 provides a Note to the Actions that states, "Separate Condition entry is allowed for each Function." This changes the CTS by stating that separate Condition entry for each function is allowed.

The purpose of the ITS Note is to state that individual functions may enter the conditional requirements separately and that each function has an independent Completion Time from each of the other instrumentation functions. This change is acceptable because it is consistent with the application of the CTS. This change is designated as administrative because it does not result in technical changes to the CTS.

MORE RESTRICTIVE CHANGES

M.1 CTS 3.3.3.5 Action a requires that if an inoperable channel can not be returned to OPERABLE status, the unit must be placed in HOT SHUTDOWN within the next 12 hours. ITS 3.3.4 Action B requires if a required channel can not be returned to OPERABLE status, the unit must be in MODE 3 within the next 6 hours and MODE 4 within the next 12 hours. This changes the CTS requirements by specifying that MODE 3 must be achieved within 6 hours.

The purpose of ITS 3.3.4 Action B.1 is to specify consistent Completion Times to shutdown the unit from full power to MODE 3. This change is acceptable because the proposed Completion Time is sufficient to allow an operator to reduce power from 100% RTP to MODE 3 in a controlled manner without challenging unit safety systems. The change has been designated as more restrictive because it specifies the amount of time within which the unit must be placed in MODE 3.

M.2 CTS LCO 3.3.3.5 states, "The auxiliary shutdown panel monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE . . . " ITS LCO 3.3.4 states, "The Remote Shutdown System Functions shall be OPERABLE." The following functions for various control systems are added to the ITS requirements: Boric Acid Pump controls, Pressurizer Heaters controls, AFW Pump and Valve controls, SG PORV

controls, and Charging Pump controls. These control systems are included in the Bases Table B3.3.4-1. ITS SR 3.3.4.2 is also added and requires verification that each required control circuit or transfer switch is capable of performing its required function once every 18 months. This changes the CTS by adding the control functions and a surveillance to verify their OPERABILITY every 18 months.

This change is acceptable because it provides the necessary requirements for the control functions that are located on the auxiliary shutdown panel in order to maintain the unit in MODE 3 without access to the control room. The inclusion of the control functions and their periodic testing provides the necessary testing to ensure remote operation of the unit outside the control room can be accomplished. This change is designated as more restrictive because it adds requirements to the CTS.

REMOVED DETAIL CHANGES

LA.1 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS 3.3.3.5 LCO states that the auxiliary shutdown monitoring instrumentation channels in Table 3.3-9 shall be OPERABLE with readouts displayed external to the control room. CTS requirement in Table 3.3-9 lists the measuring range for each required channel and the location of the auxiliary shutdown panel where the instrumentation channel is remotely displayed. ITS LCO 3.3.4 states that the Remote Shutdown Instrumentation Functions shall be OPERABLE. This changes the CTS by moving the requirement for readouts displayed external to the control room, the location of the remote readouts (auxiliary shutdown panel) and the instrument channel ranges from the specification to the UFSAR.

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. ITS 3.3.4 retains the requirement that the required instrumentation channels remain OPERABLE and displayed on the auxiliary shutdown panel. This change is acceptable because the removed information will be adequately controlled in the UFSAR. The UFSAR is controlled under 10 CFR 50.59, which ensures changes are properly evaluated. 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.2 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS 3.3.3.5 states that the auxiliary shutdown monitoring instrumentation in Table 3.3-9 shall be OPERABLE. CTS Table 4.3-6 lists the Surveillance Requirements for the functions in Table 3.3-9. ITS LCO 3.3.4 states that the Remote Shutdown Instrumentation Functions shall be OPERABLE. This changes the CTS by moving Tables 3.3-9 and 4.3-6 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 requirement for the Remote Shutdown System to be 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.

LESS RESTRICTIVE CHANGES

L.1 *(Category 1 – Relaxation of LCO Requirements)* CTS 3.3.3.5 states that the auxiliary shutdown panel monitoring instrumentation listed in Table 3.3-9 shall be OPERABLE. Function 9 of the table lists the Relay Room Positive Ventilation requirement. This requires one channel to be OPERABLE and indicate from 0 to 0.5 inches of water pressure. A CHANNEL CHECK is required once a month and a CHANNEL CALIBRATION is required each refueling. ITS 3.3.4 in Table 3.3.4-1 does not require the Relay Room Positive Ventilation instrumentation channel to be OPERABLE. This changes the CTS requirements by eliminating the Relay Room Ventilation pressure from the required channel requirements.

The purpose of ITS 3.3.4 is to require the necessary instrumentation channels to be OPERABLE to safely maintain the unit in MODE 3 from outside the control room when the control room is inhabitable. 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 Relay Room ventilation pressure does not provide a necessary parameter to ensure the unit is safely maintained in MODE 3. 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.2 *(Category 3 – Relaxation of Completion Time)* Unit 2 CTS 3.3.3.5 requires in Action a, that an inoperable channel(s) will either be returned to OPERABLE status within 7 days, or the unit must be shutdown. Unit 1 CTS 3.3.3.5 requires in Action a, that an inoperable channel(s) will either be returned to OPERABLE status within 30 days, or the unit must be shutdown. ITS LCO 3.3.4 Action A states that with one or more required functions inoperable, the required function will be restored to OPERABLE status within 30 days. This changes the Unit 2 CTS requirements for restoring a required function from 7 to 30 days.

The purpose of ITS Action A is to allow a reasonable time to restore the required function to OPERABLE status without requiring the unit to unnecessarily shutdown while providing assurance the Function can be met. This change is acceptable

because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the operability status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the repair period. This change is appropriate because the auxiliary shutdown instrumentation Functions are only required in the case of the control room evacuation event. These instrumentation channels are not required for the mitigation of any analyzed events. The likelihood of a Control Room evacuation occurring during the extended Completion Time is very small. This is consistent with Unit 1 requirements for these functions. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

UNIT 1

A.1

ITS
3.3
3.3.5

03-09-00

INSTRUMENTATION (Loss of Power (LOP) Emergency Diesel Generator (EDG))

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

A.2

LIMITING CONDITION FOR OPERATION

LCO 3.3.5

(See ITS 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.

Insert proposed ITS LCO 3.3.5 A.2

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) 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.

LA.1

LA.2

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

A.2

SURVEILLANCE REQUIREMENTS

SR s
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.

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

LA.4

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

ITS

L.1

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. LOSS OF POWER					
LCO 3.3.5 a. 4.16 Kv Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19* INSERT PROPOSED ACTION A (A.1)
LCO 3.3.5 b. 4.16 Kv Emergency Bus Undervoltage (Grid Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	22*
b. Low-Low T_{avg}, P-12	3	2	2	1, 2, 3	22*
c. Reactor Trip, P-4	2	1	2	1, 2, 3	21

see ITS 3.3.2

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ITS 3.3.5

ITS

A.1

ITS 3.3.5

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TABLE 3.3-3 (Continued)

ACTION 17 – With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.

ACTION 18 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

<see ITS 3.3.2>

Action A

ACTION 19 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

Action A Note

ACTION 20 – With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other Channel is OPERABLE.

ACTION 21 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable Channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

<see ITS 3.3.2>

ACTION 22 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant condition or apply Specification 3.0.3.

Action B

INSERT Proposed Action B

L.1

Action C

INSERT Proposed Action C

L.2

A.1

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER 4.16 KV Emergency Bus					
a. Loss of Voltage	N.A.	R	M	N.A.	1, 2, 3, 4
b. Degraded Voltage	N.A.	R	M	N.A.	1, 2, 3, 4
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	N.A	R	R	N.A.	1, 2, 3
b. Low - Low T_{avg}, P-12	N.A.	R	R	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	R	N.A.	1, 2, 3

A.1

ITS 3.3.5

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TABLE 4.3-2 (Continued)

TABLE NOTATION

Except when all MFIVs, MFRVs and associated bypass valves are closed and deactivated or isolated by a closed manual valve.

(1) Manual actuation switches shall be tested at least once per 18 months during shutdown.

(2) 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.

(3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.

(4) Only slave relays that do not satisfy any of the following criteria will be functionally tested:

1. A single failure in the Safeguards Test Cabinet circuitry would cause an inadvertent RPS or ESF actuation.
2. The test will adversely affect two or more components in one ESF system or two or more ESF systems.
3. The test will create a transient (reactivity, thermal, or hydraulic) condition on the RCS.

(5) Each train or logic channel shall be functionally tested up to and including input coil continuity testing to the ESF slave relays.

See ITS 3.3.2

LA.3

ITS

A.1

TABLE 3.3-4 (continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
6. AUXILIARY FEEDWATER PUMP START			
a. Manual	N. A.	N. A.	
b. Automatic Actuation Logic	N. A.	N. A.	
c. Steam Generator Water Level Low-Low	≥18% of narrow range instrument span each steam generator	≥17% of narrow range instrument span each steam generator	< See ITS 3.3.2 >
d. S. I.	See 1 above (all S.I. Setpoints)		
e. Station Blackout	≥2392 volts on Transfer Bus	≥2184 volts on Transfer Bus	
f. Trip of Main Feed Pump	N. A.	N. A.	
7. LOSS OF POWER	LA.2		M.2
a. 4160 Volt Emergency Bus Undervoltage (Loss of Voltage)	3080 ±13 volts with a time delay of 2.0 ±0.5 seconds	~~2935~~ ≥2989 volts with a time delay of ≤3.0 seconds and ≤ 3225V	L.3
b. 4160 Volt Emergency Bus Undervoltage (Degraded Voltage)	3746 ±7 volts with a time delay of 56 ±6 seconds	~~3720~~ ≥3868 volts with a time delay of ≤63 seconds and ≤3772	M.2 / M.1
		≥3720 volts with a time delay of ≤9.0 seconds with an SI signal	M.1

SR 3.3.5.2

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UNIT 2

A.1

ITS

03-09-00

3.3 INSTRUMENTATION Loss of Power (LOP) Emergency Diesel Generator (EDG)

3.3.5 3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION A.2

LIMITING CONDITION FOR OPERATION

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 A.2 LA.2

APPLICABILITY: As shown in Table 3.3-3.

Note ACTION: INSERT PROPOSED Note to proposed Actions 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 (Inoperable) A.1 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. LA.1 LA.2

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3. A.2

SRs **SURVEILLANCE REQUIREMENTS**

3.3.5.1 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

3.3.5.2 Actuation System instrumentation surveillance requirements specified in Table 4.3-2

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 LA.4

A.1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

L.1

ITS

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. LOSS OF POWER					
LCO 3.3.5 a. 4.16 Kv Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
LCO 3.3.5 b. 4.16 Kv Emergency Bus Under Voltage (Grid Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	22*
b. Low-Low T_{avg}, P-12	3	2	2	1, 2, 3	22*
c. Reactor Trip, P-4	2	1	2	1, 2, 3	21

INSERT PROPOSED ACTION A

(see ITS 3.3.2)

A.1

ITS 3.3.5

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ITS

TABLE 3.3-3 (Continued)

ACTION 17 – With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.

ACTION 18 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

<see ITS 3.3.2>

ACTION 19 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

Action A

a. The inoperable channel is placed in the tripped condition within 72 hours.

Action A Note

b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 20 – With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and at least HOT SHUTDOWN within the following 6 hours; however one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other Channel is OPERABLE.

ACTION 21 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable Channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

<see ITS 3.3.2>

ACTION 22 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant condition or apply Specification 3.0.3.

Action B → INSERT PROPOSED ACTION B

L.1

Action C → INSERT PROPOSED ACTION C

L.2

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A.1

TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER 4.16 KV Emergency Bus					
a. Loss of Voltage	N.A.	R	3.3.5.1 (M) (ST)	N.A.	1, 2, 3, 4
b. Degraded Voltage	N.A.	R	3.3.5.1 (M) (ST)	N.A.	1, 2, 3, 4
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	N.A.	R	R	N.A.	1, 2, 3
b. Low-Low T_{avg}, P-12	N.A.	R	R	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	R	N.A.	1, 2, 3

A.1 LA.3 3.3.5.2 (R)

See ITS 3.3.2

ITS 3.3.5
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A.1

ITS 3.3.5
03-09-00

TABLE 4.3-2 (Continued)

TABLE NOTATION

Except when all MFIVs, MFRVs and associated bypass valves are closed and deactivated or isolated by a closed manual valve.

(1) Manual actuation switches shall be tested at least once per 18 months during shutdown.

(2) 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.

(3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.

<see ITS 3.3.2>

(4) Only slave relays that do not satisfy any of the following criteria will be functionally tested:

1. A single failure in the Safeguards Test Cabinet circuitry would cause an inadvertent RPS or ESF actuation.
2. The test will adversely affect two or more components in one ESF system or two or more ESF systems.
3. The test will create a transient (reactivity, thermal, or hydraulic) condition on the RCS.

(5) Each train or logic channel shall be functionally tested up to and including input coil continuity testing to the ESF slave relays.

LA.3

ITS

A,1

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TABLE 3.3-4 (continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
6. AUXILIARY FEEDWATER PUMP START			
a. Manual	Not Applicable	Not Applicable	
b. Automatic Actuation Logic	Not Applicable	Not Applicable	
c. Steam Generator Water Level Low-Low	≥18% of narrow range instrument span each steam generator	≥17% of narrow range instrument span each steam generator	(See ITS 3.3.2)
d. S. I.	See 1 above (all S.I. Setpoints)		
e. Station Blackout	≥2392 volts on Transfer Bus	≥2184 volts on Transfer Bus	
f. Trip of Main Feed Pump	N. A.	N. A.	
SR 3.3.5.2 7. LOSS OF POWER	LA.2		
a. 4160 Volt Emergency Bus Undervoltage (Loss of Voltage)	3080 ±13 volts with a time delay of 2.0 ±0.5 seconds	≥2935 (and ≤3225V) volts with a time delay of ≤3.0 seconds	M.2, L.3
b. 4160 Volt Emergency Bus Undervoltage (Degraded Voltage)	3746 ±7 volts with a time delay of 56 ±6 seconds	3720 (and ≤3772) volts with a time delay of ≤63 seconds	M.2, M.1
		2972 Volts with a time delay of ≤ 9.0 seconds with an SI Signal	M.1

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11-29-91

ITS 3.3.5

Rev. 0

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 and are acceptable because they do not result in technical changes to the CTS.

A.2 CTS LCO 3.3.2.1, Engineered Safety Feature Actuation System (ESFAS) Instrumentation, states the trip setpoints for the features are required to be set consistent with the values listed in the Trip Setpoint column of Table 3.3-4. CTS Action b states, "With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3." ITS LCO 3.3.5, "Loss of Power (LOP) Emergency Diesel Generator (EDG) Start Instrumentation," requires three channels per bus for the undervoltage and degraded voltage functions to be OPERABLE. ITS Action A requires when a required channel becomes inoperable, the inoperable channel will be placed in a trip condition within 72 hours. This change maintains the CTS requirements for the loss of power function in the ITS format.

This change is acceptable because the technical requirements for the LOP EDG function are maintained with the change in format. The LOP EDG function continue to start the EDG on a loss of voltage or degraded voltage within the assumed time of the safety analyses. This change is designated as administrative because it does not result in a technical change to the CTS.

A.3 CTS LCO 3.3.2.1 requires the ESFAS instrumentation channels to be OPERABLE in accordance with the requirements in Table 3.3-3. If a required channel becomes inoperable, the table provides the appropriate required Actions to be performed for each required function. ITS LCO 3.3.5 requires three channels per bus for the loss of voltage and degraded voltage functions to be OPERABLE. The ITS Actions provide the appropriate Conditions, Required Actions, and Completion Times for the LOP EDG function. A Note modifies the Actions that states, "Separate Condition entry is allowed for each function." This changes the CTS by specifically stating that each Condition may be entered for each function separately and follow a separate Completion Time.

This change is acceptable because the requirements of the CTS are maintained in the ITS format. The functional requirements can affect each emergency bus separately, therefore the loss of voltage and degraded voltage function may be treated as independent. This change is designated as administrative because it does not result in a technical change to the CTS.

A.4 CTS Surveillance Requirement 4.3.2.1.2 requires the ENGINEERED SAFETY FEATURES RESPONSE TIME test on each ESFAS function at least once per 18 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." ITS SR 3.3.5.3 requires the verification of ESFAS RESPONSE TIMES are within limits every 18 months on a STAGGERED TEST BASIS (STB). This changes the CTS by deleting the logic train requirement for the LOP EDG start instrumentation.

This change is acceptable because the testing requirements of the CTS are maintained in the ITS format. The testing of every 18 months on a STB satisfies the requirement that both trains are tested every 36 months. No logic trains exist for the LOP EDG start instrumentation. 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 loss of voltage and degraded voltage. The degraded voltage Allowable Value is stated as, "≥ 3688 volts with a time delay of ≤ 63 seconds." This requirements is translated into the ITS SR 3.3.5.2 for the CHANNEL CALIBRATION for the degraded voltage Allowable Values and states the degraded voltage requirement as, "≥ 3720 volts with a time delay of ≤ 63 seconds without an SI signal." ITS SR 3.3.5.3 adds the Allowable Value requirement for degraded voltage time delay requirement with a safety injection signal and states the requirement as, "≥ 3720 volts with a time delay of ≤ 9 seconds with an SI signal." This changes the CTS by changing the Allowable Value from 3688 V to 3720 V and adding the requirement that the time delay with an SI signal be verified to be less than 9 seconds.

This change is acceptable because the EDG start instrumentation does provide a start signal to the EDG from a degraded voltage with a safety injection signal with an approximately 7.5 second time delay. The Allowable Value change is acceptable because the new value is derived from the plant setpoint methodology. The start of the EDG is required by instrumentation design and the required testing is necessary to ensure the voltage setpoint and time delay are periodically verified. This change is more restrictive because the ITS provides additional requirements that is not required by the CTS.

M.2 CTS Table 3.3-4 ESFAS Trip Setpoints list the Allowable Values for the Loss of Power on a Loss of Voltage and Degraded Voltage condition of the 4160-Volt emergency buses. The Allowable Values are listed for the minimum voltage values of each function. ITS SR 3.3.5.2 specifies a maximum and a minimum Allowable Value for the Loss of Voltage and Degraded Voltage functions. The maximum voltage Allowable Value for the Loss of Voltage is ≤ 3225 Volts, and the Degraded Voltage

Allowable Value is ≤ 3772 Volts. This changes the CTS by adding Allowable Values that are not currently specified.

This change is acceptable because the instrumentation will ensure that the emergency buses will not separate from the offsite power source while the offsite electrical power distribution subsystem has sufficient voltage to adequately supply the required emergency loads. This change is more restrictive because the ITS provides additional requirements that are not specified in the CTS.

REMOVED DETAIL CHANGES

LA.1 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS 3.3.2.1 Action a requires with an ESFAS instrumentation channel trip setpoint found less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and Action a must be entered. ITS 3.3.5 LCO requires three channels per function to be OPERABLE and Action A requires an inoperable channel to be placed in trip within 72 hours. This changes the CTS by moving the discussion of the relationship between the Allowable Value and OPERABILITY from the Technical Specification to the Bases.

This change 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 Technical Specifications continue to require an inoperable undervoltage and degraded voltage channel to be placed in a trip condition within 72 hours. 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.

LA.2 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS Table 3.3-4 functional unit 7, Loss of Power, lists the Trip Setpoints for the undervoltage and degraded voltage on the 4160-volt emergency bus. CTS 3.3.2.1 LCO and Action a state that the instrumentation channels' trip setpoints will be set, "consistent with the Trip Setpoint values." ITS 3.3.5 LCO and Actions do not contain these requirements. This changes the CTS by moving the Trip Setpoints and the trip setpoint adjustment, "consistent with the Trip Setpoint value," from the Technical Specifications to the Technical Requirements Manual (TRM).

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 requirement for three channels of the Loss of Power undervoltage and degraded voltage to be OPERABLE or appropriate Required

Actions and associated Completion Times are required to be entered. Also, this change is acceptable because these types of procedural details will be adequately controlled in the TRM. Any 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.3 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS Table 4.3-2 requires a quarterly (Q) CHANNEL FUNCTIONAL TEST (CFT) of the Loss of Power function. The Surveillance Requirement is modified by Note (5), which states, "Each train or logic channel shall 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.

This change 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 contains 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.

LA.4 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Surveillance Requirement 4.3.2.1.2 requires the ENGINEERED SAFETY FEATURES RESPONSE TIME test on each ESFAS function at least once per 18 months. The requirement additionally states, "one channel per function (will be tested) 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." This changes the CTS by moving the information from the Specification to the ITS Bases.

This change 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 categorized as less restrictive removal of details because information has been moved from the Technical Specifications to the Bases.

LESS RESTRICTIVE CHANGES

L.1 *(Category 4 – Relaxation of Required Action)* CTS Table 3.3-3 for ESFAS instrumentation states the total number of channels as three for the loss of power (LOP) functions (loss of voltage and degraded voltage). In addition, the Table states the minimum channels OPERABLE and the channels to trip as two per bus. CTS Action 19 requires an inoperable channel be placed in the tripped condition within 72 hours. ITS LCO 3.3.5 states the total number of required channels as three for each function. Condition B states "One or more Functions with two or more channels per bus inoperable, restore all but one channel to OPERABLE status in 1 hour." This changes the CTS to allow more than one channel for the functions to be inoperable and eliminates the minimum number of channels. This also deletes the channels to trip and minimum channel OPERABLE columns of Table 3.3-3.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. The ITS Action will allow one hour to restore all but one channel to OPERABLE status. This is a reasonable period of time because of the low probability of an event occurring that would require a LOP EDG start. ITS 3.3.5 does not state minimum channels or channels to trip, as does the CTS. This is acceptable because this information is not required to maintain the equipment in an OPERABLE status. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.2 *(Category 4 – Relaxation of Required Action)* CTS 3.3.2, Action 19, states that with the number of OPERABLE channels one less than the total number of channels, operation may continue provided the inoperable channel is placed in trip within 1 hour. ITS 3.3.5 Action C states, "Required Action and associated Completion Time not met, immediately enter applicable Condition(s) and Required Action(s) for the associated EDG make inoperable by LOP EDG start instrumentation." This changes the CTS by allowing the associated EDG to be declared inoperable instead of the declaring the LOP function inoperable and entering LCO 3.0.3.

This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems

or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. With the loss of function, the emergency bus's ability to supply the emergency equipment with power is degraded as having an inoperable EDG. Accident analyses require single failure assumptions. The worst single failure assumption is the same for a loss of an EDG with a station blackout, or the loss of an emergency bus from a loss or degraded voltage. Both cases result in the loss of all emergency equipment for the associated emergency bus. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.3 *(Category 1 – Relaxation of LCO Requirements)* CTS Table 3.3-4 for function 7.a, Loss of Power 4160 Volt Emergency Bus Undervoltage (Loss of Voltage) states an Allowable Value of ≥ 2989 volts. SR 3.3.5.2 states that a CHANNEL CALIBRATION is performed with an Allowable Value for the Loss of Voltage set to 2935 volts. This changes the CTS by decreasing the Allowable Value for the Loss of Voltage from 2989 to 2935 volts.

The purpose of ITS 3.3.5 Allowable Value for the Loss of Voltage function change from 2989 to 2935 volts is to establish a value that is consistent with the setpoint methodology. This change is acceptable because the LCO requirements continue to ensure that the process variable is maintained consistent with the safety analyses and licensing basis. The change to 2935 volts from 2989 volts is consistent with the method used to calculate the other RTS and ESFAS Allowable Values. This change is designated as less restrictive because less stringent LCO requirements are being applied in the ITS than were applied in the CTS.

UNIT 1

CTS 3.3.3.1

11-26-77

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

R.1

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-3.

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CTS 3.3.3.1

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel Storage Pool Area					
i. Criticality Monitor #	1	*	≤ 15 mR/hr	10^{-4} - 10^{+1} R/hr	19
b. Containment					
i. Purge & Exhaust Isolation	1	6	≤ 50 mR/hr	10^{-4} - 10^{+1} R/hr	22
ii. High Range Area	2	1,2,3,&4	≤ $1.6 \times 10^{+3}$ R/hr	10^{0} - 10^{+7} R/hr	35
2. PROCESS MONITORS					
a. Ventilation Vent #					
i. Gaseous Gross Activity	1	**	≤ 1×10^{-5} µCi/ml	10 - 10^{6} cpm	21
ii. Particulate Gross Activity	1	**	≤ 2×10^{-9} µCi/ml	10 - 10^{6} cpm	21
b. Containment					
i. Gaseous Activity					
a)Purge & Exhaust Isolation	1	6	≤ 3.6×10^{3} cpm	10 - 10^{6} cpm	22
b)RCS Leakage Detection	1	1, 2, 3 & 4	N/A	10 - 10^{6} cpm	20
ii. Particulate Activity					
a)Purge & Exhaust Isolation	1	6	≤ 1×10^{5} cpm	10 - 10^{6} cpm	22
b)RCS Leakage Detection	1	1, 2, 3 & 4	N/A	10 - 10^{6} cpm	20

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool
# Common to Unit 1 and Unit 2

R.1

See ITS 3.3.3

R.1

See ITS 3.4.15

R.1

See ITS 3.4.15

R.1

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TABLE 3.3-6 (continued)

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
2. PROCESS MONITORS (Cont'd)					
c. Noble Gas High Range Effluent Monitors					
i. Ventilation Vent #	1	1,2,3, & 4	Hi $\leq 4.72 \times 10^6 \mu Ci/sec$ Hi Hi $\leq 1.89 \times 10^7 \mu Ci/sec$	$5 \times 10^{-7} - 10^{+5} \mu Ci/cc$	35
ii. Process Vent #	1	1,2,3, & 4	Hi $\leq 4.72 \times 10^6 \mu Ci/sec$ Hi Hi $\leq 1.89 \times 10^7 \mu Ci/sec$	$5 \times 10^{-7} - 10^{+5} \mu Ci/cc$	35
iii. Main Steam ##	1/loop	1,2,3, & 4	Hi ≤ 1.0 mR/hr Hi Hi ≤ 4.0 mR/hr	$10^{-2} - 10^{+7}$ mR/hr	35
iv. Auxiliary Feedwater Pump Turbine Exhaust	1	1,2,3, & 4	Hi ≤ 0.7 mR/hr Hi Hi ≤ 2.8 mR/hr	$10^{-2} - 10^{+7}$ mR/hr	35

\# Common to Unit 1 and Unit 2.

\#\# Main steam release path includes safety valves, atmospheric steam dump valves and the decay heat release path.

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CTS 3.3.1

R.1

TABLE 3.3-6 (Continued)

TABLE NOTATION

ACTION 19 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.

R.1

ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1.

See ITS 3.4.15

ACTION 21 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

R.1

ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.

ACTION 35 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:

1. Either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or

2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

See ITS 3.3.3

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TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. AREA MONITORS				
a. Fuel Storage Pool Area				
i. Criticality Monitor #	S	R	M	*
b. Containment				
i. Purge & Exhaust Isolation	S	R	M	6
ii. High Range Area	S	R	M	1, 2, 3, & 4
2. PROCESS MONITORS				
a. Ventilation Vent #				
i. Gaseous Gross Activity	S	R	M	**
ii. Particulate Gross Activity	S	R	M	**
b. Containment				
i. Gaseous Activity				
a) Purge & Exhaust Isolation	S	R	M	6
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) Purge & Exhaust Isolation	S	R	M	6
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4

*With fuel in the storage pool or building
**With irradiated fuel in the storage pool
#Common to Unit 1 and Unit 2

R.1

R.1

See ITS 3.4.15

R.1

R.1

See ITS 3.4.15

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TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
2. PROCESS MONITORS (Cont'd)				
c) Noble Gas High Range Effluent Monitors				
i. Ventilation Vent #	S	R	M	1,2,3 & 4
ii. Process Vent #	S	R	M	1,2,3 & 4
iii. Main Steam ##	S	R	M	1,2,3 & 4
iv. Auxiliary Feedwater Pump Turbine Exhaust	S	R	M	1,2,3 & 4

Common to Unit 1 and Unit 2.

Main steam release path includes the safety valves, atmospheric steam dump valves, and the decay heat release path.

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R.1

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CTS 3.3.1

UNIT 2

CTS 3.3.3.1

8-21-80

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

R.1

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-3.

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TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel storage Pool Area Criticality Monitor #	1	*	≤ 15 mR/hr	10^{-4} - 10^{+1} R/hr	22
b. Containment					
i. Purge & Exhaust Isolation	1	6	≤ 50 mR/hr	10^{-4} - 10^{+1} R/hr	25
ii. High Range Area	2	1,2,3, & 4	≤ $1.6 \times 10^{+3}$ R/hr	10^{0} - 10^{+7} R/hr	35
2. PROCESS MONITORS					
a. Ventilation Vent #					
i. Gaseous Gross Activity	1	**	≤ 1×10^{-5} µCi/ml	10 - 10^{6} cpm	24
ii. Particulate Gross Activity	1	**	≤ 2×10^{-9} µCi/ml	10 - 10^{6} cpm	24
b. Containment					
i. Gaseous Activity					
a) Purge & Exhaust Isolation	1	6	≤ 3.6×10^{3} cpm	10 - 10^{6} cpm	25
b) RCS Leakage Detection	1	1,2,3, & 4	N/A	10 - 10^{6} cpm	23
ii. Particulate Activity					
a) Purge & Exhaust Isolation	1	6	≤ 1×10^{5} cpm	10 - 10^{6} cpm	25
b) RCS Leakage Detection	1	1,2,3, & 4	N/A	10 - 10^{6} cpm	23

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool

R.1

R.1

R.1

R.1

See ITS 3.3.3

See ITS 3.4.15

6-28-88

See ITS 3.4.15

TS 3.3.3.1

7-31-90

TABLE 3.3-6 (continued)

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
2. PROCESS MONITORS (Cont'd)					
c. Noble Gas High Range Effluent Monitors					
i. Ventilation Vent #	1	1,2,3, & 4	HI $\leq 4.72\times10^{6}$ μCi/sec HI HI $\leq 1.89\times10^{7}$ μCi/sec	5×10^{-7}-10^{+5} μCi/cc	35
ii. Process Vent #	1	1,2,3, & 4	HI $\leq 4.72\times10^{6}$ μCi/sec HI HI $\leq 1.89\times10^{7}$ μCi/sec	5×10^{-7}-10^{+5} μCi/cc	35
iii. Main Steam ##	1/loop	1,2,3, & 4	HI ≤ 1.0 mR/hr HI HI ≤ 4.0 mR/hr	10^{-2}-10^{+7} mR/hr	35
iv. Auxiliary Feedwater Pump Turbine Exhaust	1	1,2,3, & 4	HI ≤ 0.7 mR/hr HI HI ≤ 2.8 mR/hr	10^{-2}-10^{+7} mR/hr	35

\# Common to Unit 1 and Unit 2.

\#\# Main steam release path includes safety valves, atmospheric steam dump valves and the decay heat release path.

R.1

TABLE 3.3-6 (Continued)

TABLE NOTATION

ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.

R.1

ACTION 23 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1.

<See CTS 3.4.15>

ACTION 24 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 25 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.

R.1

ACTION 35 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:

1. Either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or

2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

<See CTS 3.3.3>

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED	
1. AREA MONITORS					
a. Fuel Storage Pool Area Criticality Monitor #	S	R	M	*	R.1
b. Containment					
i. Purge & Exhaust Isolation	S	R	M	6	
ii. High Range Area	S	R	M	1, 2, 3, & 4	See ITS 3.3.3
2. PROCESS MONITORS					
a. Ventilation Vent #					
i. Gaseous Gross Activity	S	R	M	**	R.1
ii. Particulate Gross Activity	S	R	M	**	
b. Containment					
i. Gaseous Activity					
a) Purge & Exhaust Isolation	S	R	M	6	
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4	See ITS 3.4.15
ii. Particulate Activity					R.1
a) Purge & Exhaust Isolation	S	R	M	6	
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4	See ITS 3.4.15

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool
# Common to Unit 1 and Unit 2

R.1

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TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
2. PROCESS MONITORS (Cont'd)				
c) Noble Gas High Range Effluent Monitors				
i. Ventilation Vent #	S	R	M	1, 2, 3, & 4
ii. Process Vent #	S	R	M	1, 2, 3, & 4
iii. Main Steam ##	S	R	M	1, 2, 3, & 4
iv. Auxiliary Feedwater Pump Turbine Exhaust	S	R	M	1, 2, 3, & 4

\# Common to Unit 1 and Unit 2.

\## Main steam release path includes the safety valves, atmospheric steam dump valves, and the decay heat release path.

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CTS 3.3.3.1

R1

RELOCATED SPECIFICATIONS

R.1 CTS 3.3.3.1 states the radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits. Portions of the Radiation Monitoring Instrumentation specification, as shown in the CTS markup, are addressed in ITS 3.4.15, RCS Leakage Detection Instrumentation, and ITS 3.3.3, Post Accident Monitoring (PAM) Instrumentation. Those portions are not addressed in this change. The Radiation Monitoring Instrumentation monitors radiation levels in selected plant locations and indicates abnormal or unusually high radiation levels. The radiation monitors are not assumed in the accident analyses to provide signals to prevent initiation of a DBA or transient or to mitigate a DBA or transient. This LCO does not meet the criteria for retention in the ITS; therefore, it will be retained in the Technical Requirements Manual.

This change is acceptable because CTS 3.3.3.1 does not meet the 10 CFR 50.36(c)(2)(ii) criteria for inclusion into the ITS.

10 CFR 50.36(c)(2)(ii) Criteria Evaluation:

1. The Radiation Monitoring Instrumentation is not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. The Radiation Monitoring Instrumentation does not satisfy Criterion 1.

2. The Radiation Monitoring Instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The Radiation Monitoring Instrumentation does not satisfy Criterion 2.

3. The Radiation Monitoring Instrumentation is not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The Radiation Monitoring Instrumentation does not satisfy Criterion 3.

4. The Radiation Monitoring Instrumentation is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. in Section 4.0, (Appendix A, page A-20) of WCAP-11618, the Radiation Monitoring Instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. The Company has reviewed this evaluation, considers it applicable to the North Anna Power Station, and concurs with this assessment. The Radiation Monitoring Instrumentation is not important for any scenarios

modeled in the North Anna Power Station site-specific PRAs. The Radiation Monitoring Instrumentation does not satisfy Criterion 4.

Since the 10 CFR 50.36(c)(2)(ii) criteria have not been met, the Radiation Monitoring Instrumentation LCO and associated Applicability, Actions, and Surveillances may be relocated out of the Technical Specifications. The Radiation Monitoring Instrumentation specification will be relocated to the TRM. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. This change is designated as relocation because the LCO did not meet the criteria in 10 CFR 50.36(c)(2)(ii) and has been relocated to the TRM.

UNIT 1

11-26-77

INSTRUMENTATION

MOVABLE INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The movable incore detection system shall be OPERABLE with:

a. At least 75% of the detector thimbles,

b. A minimum of 2 detector thimbles per core quadrant, and

c. Sufficient movable detectors, drives, and readout equipment to map these thimbles.

APPLICABILITY:

When the movable incore detection system is used for:

a. Recalibration of the excore neutron flux detection system,

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F^N_{\Delta H}$, $F_Q(Z)$ and $F_{xy}(Z)$

(R.1)

ACTION:

With the movable incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The movable incore detection system shall be demonstrated OPERABLE by normalizing each detector output to be used during its use when required for:

a. Recalibration of the excore neutron flux detection system, or

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F^N_{\Delta H}$, $F_Q(Z)$ and $F_{xy}(Z)$

UNIT 2

CTS 3.3.3.2

8-21-80

INSTRUMENTATION

MOVABLE INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The movable incore detection system shall shall be OPERABLE with:

a. At least 75% of the detector thembles

b. A minimum of 2 detector thimbles per core quadrant, and

c. Sufficient movable detectors, drives, and readout equipment to map these thimbles.

APPLICABILITY:

When the movable incore detection system is used for:

a. Recalibration of the ecore neutron flux detection system,

b. Monitoring the Quadrant POWER TILT RATIO, or

c. Measurement of $F^N_{\Delta H}$, $F_Q(Z)$ and F_{xy} (Z)

R.1

ACTION:

With the movable incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The movable incore detection system shall be demonstrated OPERABLE, at least once per 24 hours, by normalizing each detector output to be used during its use when required for:

a. Recalibration of the excore neutron flux detection system, or

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F^N_{\Delta H}$, $F_Q(Z)$ and F_{xy} (Z)

RELOCATED SPECIFICATIONS

R.1 CTS 3.3.3.2 provides requirements on the Movable Incore Detector Instrumentation when required to monitor the flux distribution within the core. The Movable Incore Detector System is used for periodic surveillance of the power distribution, and for calibration of the excore detectors. This LCO does not meet the criteria for retention in the ITS; therefore, it will be retained in the Technical Requirements Manual.

This change is acceptable because CTS 3.3.3.2 does not meet the 10 CFR 50.36(c)(2)(ii) criteria for inclusion into the ITS.

10 CFR 50.36(c)(2)(ii) Criteria Evaluation:

1. The movable incore detector instrumentation is not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. The movable incore detector instrumentation does not satisfy criterion 1.

2. The movable incore detector instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The movable incore detector instrumentation does not satisfy criterion 2.

3. The movable incore detector instrumentation is not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The movable incore detector instrumentation does not satisfy criterion 3.

4. The movable incore detector instrumentation is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. As discussed in Section 4.0, (Appendix A, page A-12) of WCAP-11618, the movable incore detector instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. The Company has reviewed this evaluation, considers it applicable to the North Anna Power Station, and concurs with this assessment. The movable incore detector instrumentation is not important for any scenarios modeled in the North Anna Power Station site-specific PRAs. The movable incore detector instrumentation does not meet criterion 4.

Since the 10 CFR 50.36(c)(2)(ii) criteria have not been met, the movable incore detector instrumentation LCO and associated Applicability, Actions, and Surveillances may be relocated out of the Technical Specifications. The movable

incore detector instrumentation specification will be relocated to the TRM. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. This change is designated as relocation because the LCO did not meet the criteria in 10 CFR 50.36(c)(2)(ii) and has been relocated to the TRM.

UNIT 1

CTS 3.3.3.3

11-26-77

INSTRUMENTATION

SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

R.1

SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above seismic monitoring instruments actuated during a seismic event shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

Rev.0

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

INSTRUMENTS AND SENSOR LOCATIONS	MEASUREMENT RANGE	MINIMUM INSTRUMENTS OPERABLE
1. Triaxial Time-History Accelerographs		
a. Containment Mat*	0 - 1.0 g	1
b. Containment Operating Level*	0 - 1.0 g	1
2. Triaxial Peak Accelerographs		
a. RHR Heat Exchanger	0 - 5.0 g	1
b. Safety Injection pipe	0 - 5.0 g	1
c. Component Cooling Heat Exchanger	0 - 5.0 g	1
3. Triaxial Seismic Switches		
a. Containment Mat*	NA	NA
4. Triaxial Response-Spectrum Recorders		
a. Containment Mat*	2 - 25.4 Hz	1
b. Auxiliary Building Mat	2 - 25.4 Hz	1
c. RHR Pipe Support	2 - 25.4 Hz	1
d. CC Heat Exchanger Support	2 - 25.4 Hz	1

*With reactor control room indication

R1

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENTS AND SENSOR LOCATIONS	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. Triaxial Time-History Accelerographs			
a. Containment Mat	M*	R	SA*
b. Containment Operating Level	M*	R	SA*
2. Triaxial Peak Accelerographs			
a. RHR Heat Exchanger	NA	R	NA
b. Safety Injection Pipe	NA	R	NA
c. Component Cooling Heat Exchanger	NA	R	NA
3. Triaxial Seismic Switches			
a. Containment Mat	NA	R	SA
4. Triaxial Response-Spectrum Recorders			
a. Containment Mat	M**	R	NA
b. Auxiliary Building Mat	M***	R	NA
c. RHR Pipe Support	NA	R	NA
d. Component Cooling Heat Exchanger Support	M***	R	NA

R1

* Except seismic trigger
** Testing will include annunciator circuit only
*** Testing will only include a visual inspection to detect for signs of obvious physical damage

RELOCATED SPECIFICATIONS

R.1 CTS 3.3.3.3 for Unit 1states the Seismic Monitoring Instrumentation shown in Table 3.3-7 shall be OPERABLE. The Seismic Monitoring Instrumentation is used to record data for use in evaluating the effect of a seismic event. The Seismic Monitoring Instrumentation is not used to mitigate a DBA or transient. The Seismic Monitoring Instrumentation does not meet the criteria for retention in the ITS; therefore, it will be retained in the Technical Requirements Manual.

This change is acceptable because the Seismic Monitoring Instrumentation in CTS 3.3.3.3 does not meet the 10 CFR 50.36(c)(2)(ii) criteria for inclusion into the ITS.

10 CFR 50.36(c)(2)(ii) Criteria Evaluation:

1. The Seismic Monitoring Instrumentation is not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. The Seismic Monitoring Instrumentation does not meet criterion 1.

2. The Seismic Monitoring Instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The Seismic Monitoring Instrumentation does not meet criterion 2.

3. The Seismic Monitoring Instrumentation is not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The Seismic Monitoring Instrumentation does not meet criterion 3.

4. The Seismic Monitoring Instrumentation is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. As discussed in Section 4.0, (Appendix A, page A-22) of WCAP-11618, the Seismic Monitoring Instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. The Company has reviewed this evaluation, considers it applicable to the North Anna Power Station, and concurs with this assessment. The Seismic Monitoring Instrumentation is not important for any scenarios modeled in the North Anna Power Station site-specific PRAs. Therefore, Seismic Monitoring Instrumentation does not meet criterion 4.

Since the 10 CFR 50.36(c)(2)(ii) criteria have not been met, the Seismic Monitoring Instrumentation LCO and associated Applicability, Actions, and Surveillances may be relocated out of the Technical Specifications. The Seismic Monitoring Instrumentation specification will be relocated to the TRM. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. This change is designated as relocation because the LCO did not meet the criteria in 10 CFR 50.36(c)(2)(ii) and has been relocated to the TRM.

UNIT 1

CTS 3.3.3.4

11-26-77

INSTRUMENTATION

METEOROLOGICAL INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.4 The meteorological monitoring instrumentation channels shown in Table 3.3-8 shall be OPERABLE.*

APPLICABILITY: At all times.

ACTION:

a. With one or more required meteorological monitoring channels inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

R,1

SURVEILLANCE REQUIREMENTS

4.3.3.4 Each of the above meteorological monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-5.

*Common to Unit 1 and Unit 2

CTS 3.3.3.4

11-26-77

TABLE 3.3-8

METEOROLOGICAL MONITORING INSTRUMENTATION

INSTRUMENT	LOCATION	MINIMUM OPERABLE
1. WIND SPEED		
a.	Nominal Elev. 33 ft. (10m)	1
b.	Nominal Elev. 150 ft (~49m)	1
2. WIND DIRECTION		
a.	Nominal Elev. 33 ft. (10m)	1
b.	Nominal Elev. 150 ft. (~49m)	1
3. AIR TEMPERATURE		
a.	Nominal Elev. 33 ft. (10m)	1
4. AIR TEMPERATURE DELTA T		
a.	Between a Nominal Elev. of 33 ft. (10m) and a Nominal Elev. of 150 ft. (~49m)	1

R.1

CTS 3.3.3.4

11-26-77

TABLE 4.3-5

METEOROLOGICAL MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. WIND SPEED		
a. Nominal Elev. 33 ft. (10m)	D	SA
b. Nominal Elev. 150 ft. (~49m)	D	SA
2. WIND DIRECTION		
a. Nominal Elev. 33 ft. (10m)	D	SA
b. Nominal Elev. 150 ft. (~49m)	D	SA
3. AIR TEMPERATURE		
a. Nominal Elev.33 ft. (10m)	D	SA
4. AIR TEMPERATURE - DELTA T		
a. Between a Nominal Elev. of 33 ft. (10m) and a Nominal Elev. of 150 ft (~49m)	D	SA

R1

DISCUSSION OF CHANGES
CTS 3.3.3.4, METEOROLOGICAL MONITORING INSTRUMENTATION

RELOCATED SPECIFICATIONS

R.1 CTS 3.3.3.4 for Unit 1states the Meteorological Monitoring Instrumentation shown in Tables 3.3-8 and 4.3-5 shall be OPERABLE. The Meteorological Monitoring Instrumentation is used to record meteorological data for use in evaluating the effect of an accidental radioactive release from the plant. The Meteorological Monitoring Instrumentation is not used to mitigate a DBA or transient. The Meteorological Monitoring Instrumentation does not meet the criteria for retention in the ITS; therefore, it will be retained in the Technical Requirements Manual.

This change is acceptable because the Meteorological Monitoring Instrumentation in CTS 3.3.3.3 does not meet the 10 CFR 50.36(c)(2)(ii) criteria for inclusion into the ITS.

10 CFR 50.36(c)(2)(ii) Criteria Evaluation:

1. The Meteorological Monitoring Instrumentation is not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. Therefore, Meteorological Monitoring Instrumentation does not meet criterion 1.

2. The Meteorological Monitoring Instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, Meteorological Monitoring Instrumentation does not meet criterion 2.

3. The Meteorological Monitoring Instrumentation is not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, Meteorological Monitoring Instrumentation does not meet criterion 3.

4. The Meteorological Monitoring Instrumentation is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. As discussed in Section 4.0, (Appendix A, page A-23) of WCAP-11618, the Meteorological Monitoring Instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. The Company has reviewed this evaluation, considers it applicable to the North Anna Power Station, and concurs with this assessment. The Meteorological Monitoring Instrumentation is not important for any scenarios modeled in the North Anna Power Station site-specific PRAs. Therefore, Meteorological Monitoring Instrumentation does not meet criterion 4.

Since the 10 CFR 50.36(c)(2)(ii) criteria have not been met, the Meteorological Monitoring Instrumentation LCO and associated Applicability, Actions, and Surveillances may be relocated out of the Technical Specifications. The Meteorological Monitoring Instrumentation specification will be relocated to the TRM. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. This change is designated as relocation because the LCO did not meet the criteria in 10 CFR 50.36(c)(2)(ii) and has been relocated to the TRM.

UNIT 1

CTS 3.3.3.9

2-1-85

INSTRUMENTATION

LOOSE PARTS MONITORING SYSTEMS

LIMITING CONDITIONS FOR OPERATION

3.3.3.9 The loose parts monitoring system instrumentation identified in Table 3.3-12 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION

If all channels of one or more collection regions are inoperable, restore the instrument(s) to OPERABLE status within 30 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channels to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each channel of the loose parts monitoring system identified in Table 3.3-12 shall be demonstrated OPERABLE by the performance of:

a. A CHANNEL CHECK at least once per 24 hours.

b. A CHANNEL FUNCTIONAL TEST at least once per 31 days.

c. A CHANNEL CALIBRATION at least once per 18 months.

R.1

Rev 0

4-27-79

TABLE 3.3-12

LOOSE PARTS MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE
1. Steam Generator Transducers	1/steam generator
2. Reactor Vessel Flange Transducers	1/2
3. Reactor Vessel Lower Plenum Transducers	1/2

(R.1)

RELOCATED SPECIFICATIONS

R.1 Unit 1 CTS 3.3.3.9 requires the OPERABILITY of the loose parts detection instrumentation which can detect loose metallic parts in the Reactor Coolant System in order to avoid damage to the Reactor Coolant System components. The Unit 2 Technical Specifications do not contain this Specification. This LCO does not meet the criteria for retention in the ITS; therefore, it will be retained in the Technical Requirements Manual.

This change is acceptable because CTS 3.3.3.9 does not meet the 10 CFR 50.92(c)(2)(ii) criteria for inclusion into the ITS.

10 CFR 50.36(c)(2)(ii) Criteria Evaluation:

1. The loose parts monitoring systems are not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. The loose parts monitoring systems do not satisfy criterion 1.

2. The loose parts monitoring systems are not a process variable, design feature, or operating restriction that is an initial condition of a DBA or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The loose parts monitoring systems do not satisfy criterion 2.

3. The loose parts monitoring systems are not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The loose parts monitoring systems do not satisfy criterion 3.

4. The loose parts monitoring systems are not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety As discussed in Section 4.0, (Appendix A, page A-29) of WCAP-11618, the loose parts monitoring systems were found to be a non-significant risk contributor to core damage frequency and offsite releases. The Company has reviewed this evaluation, considers it applicable to the North Anna Power Station, and concurs with this assessment. The loose parts monitoring systems are not important for any scenarios modeled in the North Anna Power Station site-specific PRAs. The loose parts monitoring systems do not meet criterion 4.

Since the 10 CFR 50.36(c)(2)(ii) criteria have not been met, loose parts monitoring systems LCO and associated Applicability, Actions, and Surveillances may be relocated from the Technical Specifications. The loose parts monitoring systems

specification will be relocated to the TRM. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. This change is designated as relocation because the LCO did not meet the criteria in 10 CFR 50.36(c)(2)(ii) and has been relocated to the TRM.

UNIT 1

7-19-90

INSTRUMENTATION

EXPLOSIVE GAS MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.11 The explosive gas monitoring instrumentation channels shown in Table 3.3-14 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded.

APPLICABILITY: As shown in Table 3.3-14.

ACTION:

a. With an explosive gas monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, declare the channel inoperable, and take the ACTION shown in Table 3.3-14.

b. With less than the minimum number of explosive gas monitoring instrumentation channels OPERABLE, for reasons other than a above, take the ACTION shown in Table 3.3-14. Exert best efforts to return the instruments to OPERABLE status within 30 days and, if unsuccessful, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 to explain why the inoperability was not corrected in a timely manner.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

(R.1)

SURVEILLANCE REQUIREMENTS

4.3.3.11 Each explosive gas monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-14.

9-25-91

TABLE 3.3-14

EXPLOSIVE GAS MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY	ACTION
1. DELETED			
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM (Shared with Unit 2)			
a. Oxygen Monitor	1	• •	32

• During process vent system operation (treatment for primary system offgasses).

ACTION 32 - With this channel inoperable, operation may continue provided grab samples are taken and analyzed: (1) every 4 hours during degassing operations and (2) daily during other operations.

R.1

9-25-91 (R1)

TABLE 4.3-14

EXPLOSIVE GAS MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. DELETED					
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Oxygen Monitor	D	N.A.	Q(1)	M	**

** During process vent system operation (treatment for primary system offgasses)

(1) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

1. One volume percent oxygen, balance nitrogen, and
2. Four volume percent oxygen, balance nitrogen.

UNIT 2

CTS 3.3.3.11

7-19-90

INSTRUMENTATION

EXPLOSIVE GAS MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.11 The explosive gas monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded.

APPLICABILITY: As shown in Table 3.3-13

ACTION:

a. With an explosive gas monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, declare the channel inoperable, and take the ACTION shown in Table 3.3-13.

b. With less than the minimum number of explosive gas monitoring instrumentation channels OPERABLE, for reasons other than a above, take the ACTION shown in Table 3.3-13. Exert best efforts to return the instruments to OPERABLE status within 30 days and, if unsuccessful, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 to explain why the inoperability was not corrected in a timely manner.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

(R.1)

SURVEILLANCE REQUIREMENTS

4.3.3.11 Each explosive gas monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-13.

9-25-91

R.1

TABLE 3.3-13

EXPLOSIVE GAS MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY	ACTION
1. DELETED			
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM (Shared with Unit 1)			
a. Oxygen Monitor	1	**	32

** During process vent system operation (treatment for primary system offgasses).

ACTION 32 - With this channel inoperable, operation may continue provided grab samples are taken and analyzed: (1) every 4 hours during degassing operations and (2) daily during other operations.

9-25-91 (R.1)

TABLE 4.3-13

EXPLOSIVE GAS MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. DELETED					
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Oxygen Monitor	D	N.A.	Q(1)	M	**

** During process vent system operation (treatment for primary system offgasses)

(1) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

1. One volume percent oxygen, balance nitrogen, and
2. Four volume percent oxygen, balance nitrogen.

RELOCATED SPECIFICATIONS

R.1 CTS 3.3.3.11 requires the Explosive Gas Monitoring Instrumentation be OPERABLE. The Explosive Gas Monitoring Instrumentation is used to ensure that the oxygen limits of the Waste Gas Holdup System are not exceeded. The oxygen concentration limit in the Waste Gas Holdup Tank ensures that the concentration of potentially explosive gas mixtures in the Waste Gas Holdup System is maintained below the flammability limits. This instrumentation is not credited in preventing or mitigating any DBA or transient as the safety analysis concerning the Waste Gas Holdup System assumes a storage tank rupture with no mitigation. This LCO does not meet the criteria for retention in the ITS; therefore, it will be retained in the Technical Requirements Manual (TRM).

This change is acceptable because CTS 3.3.3.11 does not meet the 10 CFR 50.92(c)(2)(ii) criteria for inclusion into the ITS.

10 CFR 50.36(c)(2)(ii) Criteria Evaluation:

1. The Explosive Gas Monitoring Instrumentation is not installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. The Explosive Gas Monitoring Instrumentation does not satisfy Criterion 1.

2. The Explosive Gas Monitoring Instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a DBA or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The Explosive Gas Monitoring Instrumentation does not satisfy Criterion 2.

3. The Explosive Gas Monitoring Instrumentation is not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The Explosive Gas Monitoring Instrumentation does not satisfy Criterion 3.

4. The Explosive Gas Monitoring Instrumentation is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. As discussed in Section 4.0, (Appendix A, page A-69) of WCAP-11618, the Explosive Gas Monitoring Instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. The Company has reviewed this evaluation, considers it applicable to the North Anna Power Station, and concurs with this assessment. The reactor vessel head vents are not important for any scenarios modeled in the North Anna Power Station site-specific PRAs. The Explosive Gas Monitoring Instrumentation does not satisfy Criterion 4.

Since the 10 CFR 50.36(c)(2)(ii) criteria have not been met, the Explosive Gas Monitoring Instrumentation LCO and associated Applicability, Actions, and Surveillances may be relocated out of the Technical Specifications. The Explosive Gas Monitoring Instrumentation specification will be relocated to the TRM. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. This change is designated as relocation because the LCO did not meet the criteria in 10 CFR 50.36(c)(2)(ii) and has been relocated to the TRM.

SECTION 3.3 - INSTRUMENTATION

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS

GENERIC NSHCs

10 CFR 50.92 EVALUATION
FOR
ADMINISTRATIVE CHANGES

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve reformatting, renumbering, and rewording of Technical Specifications with no change in intent. These changes, since they do not involve technical changes to the Technical Specifications, are administrative.

This type of change is connected with the movement of requirements within the current requirements, or with the modification of wording that does not affect the technical content of the current Technical Specifications. These changes will also include nontechnical modifications of requirements to conform to the Writer's Guide or provide consistency with the Improved Standard Technical Specifications in NUREG-1431. Administrative changes are not intended to add, delete, or relocate any technical requirements of the current Technical Specifications.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change involves reformatting, renumbering, and rewording the existing Technical Specifications. The reformatting, renumbering, and rewording process involves no technical changes to the existing Technical Specifications. As such, this change is administrative in nature and does not affect initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in methods governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The proposed change will not reduce a margin of safety because it has no effect on any safety analyses assumptions. This change is administrative in nature. Therefore, the change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
MORE RESTRICTIVE CHANGES

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve adding more restrictive requirements to the existing Technical Specifications by either making current requirements more stringent or by adding new requirements that currently do not exist.

These changes include additional commitments that decrease allowed outage times, increase the frequency of surveillances, impose additional surveillances, increase the scope of specifications to include additional plant equipment, increase the applicability of specifications, or provide additional actions. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change provides more stringent requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements continue to ensure process variables, structures, systems, and components are maintained consistent with the safety analyses and licensing basis. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in methods governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with the assumptions in the safety analyses and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The imposition of more restrictive requirements either has no effect on or increases the margin of plant safety. As provided in the discussion of change, each change in this category is, by definition, providing additional restrictions to enhance plant safety. The change maintains requirements within the safety analyses and licensing basis. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
RELOCATED SPECIFICATIONS

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve relocating existing Technical Specification LCOs to licensee controlled documents.

The the Company has evaluated the current Technical Specifications using the criteria set forth in 10 CFR 50.36. Specifications identified by this evaluation that did not meet the retention requirements specified in the regulation are not included in the Improved Technical Specifications (ITS) submittal. These specifications have been relocated from the current Technical Specifications to the Technical Requirements Manual.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change relocates requirements and surveillances for structures, systems, components or variables that do not meet the criteria of 10 CFR 50.36 (c)(2)(ii) for inclusion in Technical Specifications as identified in the Application of Selection Criteria to the North Anna Technical Specifications. The affected structures, systems, components or variables are not assumed to be initiators of analyzed events and are not assumed to mitigate accident or transient events. The requirements and surveillances for these affected structures, systems, components or variables will be relocated from the Technical Specifications to the Technical Requirements Manual, which will be maintained pursuant to 10 CFR 50.59. In addition, the affected structures, systems, components or variables are addressed in existing surveillance procedures which are also controlled by 10 CFR.50.59 and subject to the change control provisions imposed by plant administrative procedures, which endorse applicable regulations and standards. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or change in the methods governing normal plant operation. The proposed change will not impose or eliminate any requirements and adequate control of existing requirements will be maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The proposed change will not reduce a margin of safety because it has no significant effect on any safety analyses assumptions, as indicated by the fact that the requirements do not meet the 10 CFR 50.36 criteria for retention. In addition, the relocated requirements are moved without change and any future changes to these requirements will be evaluated per 10 CFR 50.59.

NRC prior review and approval of changes to these relocated requirements, in accordance with 10 CFR 50.92, will no longer be required. This review and approval does not provide a specific margin of safety which can be evaluated. However, since the proposed change is consistent with the Westinghouse Standard Technical Specifications, NUREG-1431 issued by the NRC, revising the Technical Specifications to reflect the approved level of detail gives assurance that this relocation does not result in a significant reduction in the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES - REMOVED DETAIL

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve moving details out of the Technical Specifications and into the Technical Specifications Bases, the UFSAR, the TRM or other documents under regulatory control such as the Quality Assurance Program Topical Report. The removal of this information is considered to be less restrictive because it is no longer controlled by the Technical Specification change process. Typically, the information moved is descriptive in nature and its removal conforms with NUREG-1431 for format and content.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change relocates certain details from the Technical Specifications to other documents under regulatory control. The Bases, UFSAR, and Technical Requirement Manual will be maintained in accordance with 10 CFR 50.59. In addition to 10 CFR 50.59 provisions, the Technical Specification Bases are subject to the change control provisions in the Administrative Controls Chapter of the Technical Specifications. The UFSAR is subject to the change control provisions of 10 CFR 50.71(e). Other documents are subject to controls imposed by Technical Specifications or regulations. Since any changes to these documents will be evaluated, no significant increase in the probability or consequences of an accident previously evaluated will be allowed. Therefore this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operations. The proposed change will not impose or eliminate any requirements, and adequate control of the information will be maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Does this change involve a significant reduction in a margin of safety?**

   The proposed change will not reduce a margin of safety because it has no effect on any safety analysis assumptions. In addition, the details to be moved from the Technical Specifications to other documents are not being changed. Since any future changes to these details will be evaluated under the applicable regulatory change control mechanism,

no significant reduction in a margin of safety will be allowed. A significant reduction in the margin of safety is not associated with the elimination of the 10 CFR 50.92 requirement for NRC review and approval of future changes to the relocated details. The proposed change is consistent with the Westinghouse Standard Technical Specifications, NUREG-1431, issued by the NRC Staff, revising the Technical Specifications to reflect the approved level of detail, which indicates that there is no significant reduction in the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 1
RELAXATION OF LCO REQUIREMENTS

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve relaxation of the current Technical Specification (CTS) Limiting Conditions for Operation (LCOs) by the elimination of specific items from the LCO or Tables referenced in the LCO, or the addition of exceptions to the LCO.

These changes reflect the ISTS approach to provide LCO requirements that specify the protective conditions that are required to meet safety analysis assumptions for required features. These conditions replace the lists of specific devices used in the CTS to describe the requirements needed to meet the safety analysis assumptions. The ITS also includes LCO Notes which allow exceptions to the LCO for the performance of testing or other operational needs. The ITS provides the protection required by the safety analysis and provides flexibility for meeting the conditions without adversely affecting operations since equivalent features are required to be OPERABLE. The ITS is also consistent with the plant current licensing basis, as may be modified in the discussion of individual changes. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change provides less restrictive LCO requirements for operation of the facility. These less restrictive LCO requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event in that the requirements continue to ensure process variables, structures, systems, and components are maintained consistent with the current safety analyses and licensing basis. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The proposed change does impose different requirements. However, the change is consistent with the assumptions in the current safety analyses and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The imposition of less restrictive LCO requirements does not involve a significant reduction in the margin of safety. As provided in the discussion of change, this change has been evaluated to ensure that the current safety analyses and licensing basis requirements are maintained. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 2
RELAXATION OF APPLICABILITY

The North Anna Nuclear Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve relaxation of the applicability of current Technical Specification (CTS) Limiting Conditions for Operation (LCOs) by reducing the conditions under which the LCO requirements must be met.

Reactor operating conditions are used in CTS to define when the LCO features are required to be OPERABLE. CTS Applicabilities can be specific defined terms of reactor conditions or more general such as, "all MODES" or "any operating MODE." Generalized applicability conditions are not contained in ITS, therefore the ITS eliminates CTS requirements such as "all MODES" or "any operating MODE," replacing them with ITS defined MODES or applicable conditions that are consistent with the application of the plant safety analysis assumptions for operability of the required features.

CTS requirements may also be eliminated during conditions for which the safety function of the specified safety system is met because the feature is performing its intended safety function. Deleting applicability requirements that are indeterminate or which are inconsistent with application of accident analyses assumptions is acceptable because when LCOs cannot be met, the TS may be satisfied by exiting the applicability which takes the plant out of the conditions that require the safety system to be OPERABLE.

This change provides the protection required by the safety analysis and provides flexibility for meeting limits by restricting the application of the limits to the conditions assumed in the safety analyses. The ITS is also consistent with the plant current licensing basis, as may be modified in the discussion of individual changes. The change is generally made to conform with NUREG-1431 and has been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change relaxes the conditions under which the LCO requirements for operation of the facility must be met. These less restrictive applicability requirements for the LCOs do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event in that the requirements continue to ensure that process variables, structures, systems, and components are maintained in the MODES and other specified conditions assumed in the safety analyses and licensing basis. Therefore, this change

does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The proposed change does impose different requirements. However, the requirements are consistent with the assumptions in the safety analyses and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Does this change involve a significant reduction in a margin of safety?**

The relaxed applicability of LCO requirements does not involve a significant reduction in the margin of safety. As provided in the discussion of change, this change has been evaluated to ensure that the LCO requirements are applied in the MODES and specified conditions assumed in the safety analyses and licensing basis. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 3
RELAXATION OF COMPLETION TIME

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve relaxation of the Completion Times for Required Actions in the current Technical Specifications (CTS).

Upon discovery of a failure to meet an LCO, the ITS specifies times for completing Required Actions of the associated TS Conditions. Required Actions of the associated Conditions are used to establish remedial measures that must be taken within specified Completion Times (referred to as Allowed Outage Times (AOTs) in the CTS). These times define limits during which operation in a degraded condition is permitted. Adopting Completion Times from the ITS is acceptable because the Completion Times take into account the operability status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the repair period. In addition, the ITS provides consistent Completion Times for similar conditions. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change relaxes the Completion Time for a Required Action. Required Actions and their associated Completion Times are not initiating conditions for any accident previously evaluated and the accident analyses do not assume that required equipment is out of service prior to the analyzed event. Consequently, the relaxed Completion Time does not significantly increase the probability of any accident previously evaluated. The consequences of an analyzed accident during the relaxed Completion Time are the same as the consequences during the existing AOT. As a result, the consequences of any accident previously evaluated are not significantly increased. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the method governing normal plant operation. The Required Actions and associated Completion Times in the ITS have been evaluated to ensure that no new accident initiators are introduced. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Does this change involve a significant reduction in a margin of safety?**

The relaxed Completion Time for a Required Action does not involve a significant reduction in the margin of safety. As provided in the discussion of change, the change has been evaluated to ensure that the allowed Completion Time is consistent with safe operation under the specified Condition, considering the operability status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the repair period. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 4
RELAXATION OF REQUIRED ACTION

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve relaxation of the Required Actions in the current Technical Specifications (CTS).

Upon discovery of a failure to meet an LCO, the ITS specifies Required Actions to complete for the associated Conditions. Required Actions of the associated Conditions are used to establish remedial measures that must be taken in response to the degraded conditions. These actions minimize the risk associated with continued operation while providing time to repair inoperable features. Some of the Required Actions are modified to place the plant in a MODE in which the LCO does not apply. Adopting Required Actions from the ISTS is acceptable because the Required Actions take into account the operability status of redundant systems of required features, the capacity and capability of the remaining features, and the compensatory attributes of the Required Actions as compared to the LCO requirements. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change relaxes Required Actions. Required Actions and their associated Completion Times are not initiating conditions for any accident previously evaluated and the accident analyses do not assume that required equipment is out of service prior to the analyzed event. Consequently, the relaxed Required Actions do not significantly increase the probability of any accident previously evaluated. The Required Actions in the ITS have been developed to provide appropriate remedial actions to be taken in response to the degraded condition considering the operability status of the redundant systems of required features, and the capacity and capability of remaining features while minimizing the risk associated with continued operation. As a result, the consequences of any accident previously evaluated are not significantly increased. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The Required Actions and associated Completion Times in the ITS have been evaluated to ensure that no new accident initiators are introduced. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Does this change involve a significant reduction in a margin of safety?**

The relaxed Required Actions do not involve a significant reduction in the margin of safety. As provided in the discussion of change, this change has been evaluated to minimize the risk of continued operation under the specified Condition, considering the operability status of the redundant systems of required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the repair period. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 5
DELETION OF SURVEILLANCE REQUIREMENT

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve deletion of Surveillance Requirements in the current Technical Specifications (CTS).

The CTS require safety systems to be tested and verified Operable prior to entering applicable operating conditions. The ITS eliminates unnecessary CTS Surveillance Requirements that do not contribute to verification that the equipment used to meet the LCO can perform its required functions. Thus, appropriate equipment continues to be tested in a manner and at a frequency necessary to give confidence that the equipment can perform its assumed safety function. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change deletes Surveillance Requirements. Surveillances are not initiators to any accident previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased. The equipment being tested is still required to be Operable and capable of performing the accident mitigation functions assumed in the accident analysis. As a result, the consequences of any accident previously evaluated are not significantly affected. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The remaining Surveillance Requirements are consistent with industry practice and are considered to be sufficient to prevent the removal of the subject Surveillances from creating a new or different type of accident. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The deleted Surveillance Requirements do not result in a significant reduction in the margin of safety. As provided in the discussion of change, the change has been evaluated to ensure that the deleted Surveillance Requirements are not necessary for verification that the equipment used to meet the LCO can perform its required functions. Thus, appropriate equipment continues to be tested in a manner and at a frequency necessary to give confidence that the equipment can perform its assumed safety function. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 6
RELAXATION OF SURVEILLANCE REQUIREMENT ACCEPTANCE CRITERIA

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve the relaxation of Surveillance Requirements acceptance criteria in the current Technical Specifications (CTS).

The CTS require safety systems to be tested and verified Operable prior to entering applicable operating conditions. The ITS eliminates or relaxes the Surveillance Requirement acceptance criteria that do not contribute to verification that the equipment used to meet the LCO can perform its required functions. For example, the ITS allows some Surveillance Requirements to verify Operability under actual or test conditions. Adopting the ITS allowance for "actual" conditions is acceptable because required features cannot distinguish between an "actual" signal or a "test" signal. Also included are changes to CTS requirements that are replaced in the ITS with separate and distinct testing requirements which, when combined, include Operability verification of all TS required components for the features specified in the CTS. Adopting this format preference in the ISTS is acceptable because Surveillance Requirements that remain include testing of all previous features required to be verified OPERABLE. Changes which provide exceptions to Surveillance Requirements to provide for variations which do not affect the results of the test are also included in this category. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change relaxes the acceptance criteria of Surveillance Requirements. Surveillances are not initiators to any accident previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased. The equipment being tested is still required to be Operable and capable of performing the accident mitigation functions assumed in the accident analysis. As a result, the consequences of any accident previously evaluated are not significantly affected. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The relaxed acceptance criteria for Surveillance Requirements do not result in a significant reduction in the margin of safety. As provided in the discussion of change, the relaxed Surveillance Requirement acceptance criteria have been evaluated to ensure that they are sufficient to verify that the equipment used to meet the LCO can perform its required functions. Thus, appropriate equipment continues to be tested in a manner that gives confidence that the equipment can perform its assumed safety function. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 7
RELAXATION OF SURVEILLANCE FREQUENCY

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve the relaxation of Surveillance Frequencies in the current Technical Specifications (CTS).

CTS and ITS Surveillance Frequencies specify time interval requirements for performing surveillance testing. Increasing the time interval between Surveillance tests in the ITS results in decreased equipment unavailability due to testing which also increases equipment availability. In general, the ITS contain test frequencies that are consistent with industry practice or industry standards for achieving acceptable levels of equipment reliability. Adopting testing practices specified in the ITS is acceptable based on similar design, like-component testing for the system application and the availability of other Technical Specification requirements which provide regular checks to ensure limits are met. Relaxation of Surveillance Frequency can also include the addition of Surveillance Notes which allow testing to be delayed until appropriate unit conditions for the test are established, or exempt testing in certain MODES or specified conditions in which the testing can not be performed.

Reduced testing can result in a safety enhancement because the unavailability due to testing is reduced and; in turn, reliability of the affected structure, system or component should remain constant or increase. Reduced testing is acceptable where operating experience, industry practice or the industry standards such as manufacturers' recommendations have shown that these components usually pass the Surveillance when performed at the specified interval, thus the frequency is acceptable from a reliability standpoint. Surveillance Frequency changes to incorporate alternate train testing have been shown to be acceptable where other qualitative or quantitative test requirements are required which are established predictors of system performance. Surveillance Frequency extensions can be based on NRC-approved topical reports. The NRC staff has accepted topical report analyses that bound the plant-specific design and component reliability assumptions. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change relaxes Surveillance Frequencies. The relaxed Surveillance Frequencies have been established based on achieving acceptable levels of equipment reliability. Consequently, equipment which could initiate an accident previously evaluated will continue to operate as expected and the probability of the initiation of any accident previously evaluated will not be significantly increased. The equipment being

tested is still required to be Operable and capable of performing any accident mitigation functions assumed in the accident analysis. As a result, the consequences of any accident previously evaluated are not significantly affected. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **Does this change involve a significant reduction in a margin of safety?**

The relaxed Surveillance Frequencies do not result in a significant reduction in the margin of safety. As provided in the discussion of change, the relaxation in the Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. Thus, appropriate equipment continues to be tested at a Frequency that gives confidence that the equipment can perform its assumed safety function when required. Therefore, this change does not involve a significant reduction in a margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES – CATEGORY 8
DELETION OF REPORTING REQUIREMENTS

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." Some of the proposed changes involve the deletion of requirements in the current Technical Specifications (CTS) to send reports to the NRC.

The CTS includes requirements to submit reports to the NRC under certain circumstances. However, the ITS eliminates these requirements for many such reports and, in many cases, relies on the reporting requirements of 10 CFR 50.73 or other regulatory requirements. The ITS changes to reporting requirements are acceptable because the regulations provide adequate reporting requirements, or the reports do not affect continued plant operation. Therefore, this change has no effect on the safe operation of the plant. These changes are generally made to conform with NUREG-1431 and have been evaluated to not be detrimental to plant safety.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   The proposed change deletes reporting requirements. Sending reports to the NRC is not an initiator to any accident previously evaluated. Consequently, the probability of any accident previously evaluated is not significantly increased. Sending reports to the NRC has no effect on the ability of equipment to mitigate an accident previously evaluated. As a result, the consequences of any accident previously evaluated is not significantly affected. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The deletion of reporting requirements does not result in a significant reduction in the margin of safety. The ITS eliminates the requirements for many such reports and, in many cases, relies on the reporting requirements of 10 CFR 50.73 or other regulatory requirements. The change to reporting requirements does not affect the margin of safety because the regulations provide adequate reporting requirements, or the reports do not affect continued plant operation. Therefore, this change does not involve a significant reduction in a margin of safety.

This proposed Technical Specification change has been evaluated against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. It has been determined that the proposed change meets the criteria for categorical exclusion as provided for under 10 CFR 51.22(c)(9). The following is a discussion of how the proposed Technical Specification change meets the criteria for categorical exclusion.

10 CFR 51.22(c)(9): Although the proposed change involves changes to requirements with respect to inspection or surveillance requirements,

(i) proposed change involves No Significant Hazards Considerations (refer to the Determination of No Significant Hazards Considerations section of this Technical Specification Change Request);

(ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite since the proposed changes do not affect the generation of any radioactive effluents nor do they affect any of the permitted release paths; and

(iii) there is no significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Based on the aforementioned and pursuant to 10 CFR 51.22 (b), no environmental assessment or environmental affect statement need be prepared in connection with issuance of an amendment to the Technical Specifications incorporating the proposed change of this request.

SECTION 3.3 - INSTRUMENTATION

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS

SPECIFIC NSHCs

There are no specific NSHC discussions for this Section.