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Director
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

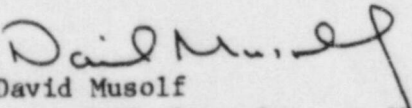
PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Preliminary Shunt Trip Technical Specifications

Our letter of July 6, 1984 provided our response to NRC generic questions related to the Shunt Trip Modification. In our response to question 13 we stated that a review of existing testing intervals identified no requirements for Technical Specification changes. Through discussions with the NRC Project Manager for Prairie Island and a review of Generic Letter 83-28, we have concluded that changes to the Technical Specifications are desirable to reflect the Shunt Trip Modification.

This letter is intended to supplement our July 6, 1984 submittal by providing a preliminary draft of Technical Specification changes incorporating the shunt trip and manual reactor trip requirements requested in the NRC Generic Safety Evaluation Report for the Westinghouse Shunt Trip Modification. We believe these proposed changes will provide adequate assurance that the reactor trip system is maintained in a highly reliable state while providing workable operability and surveillance requirements.

These proposed changes are preliminary in nature and minor changes to the format or wording may occur when they are submitted formally in a License Amendment Request. Please contact us if you have any questions related to this information.


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Manager-Nuclear Support Services

DMM/EFE/dab

c: Regional Administrator-III, NRC
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Attachments

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INFORMATION ONLY

TABLE TS.3.5-2

INSTRUMENT OPERATING CONDITIONS FOR REACTOR TRIP
(Page 1 of 2)

FUNCTIONAL UNIT	1 MINIMUM OPERABLE CHANNELS	2 MINIMUM DEGREE OF REDUNDANCY	3 PERMISSIBLE BYPASS CONDITIONS (1)	4 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET
1. Manual	2	1		Notes 3, 4
2. Nuclear Flux Power Range*				
low setting	3	2	2 of 4 power	Maintain hot shutdown
high setting	3	2	range channels	
positive rate	3	2	greater than	
negative rate	3	2	10% F.P. (low	
			setting only)	
3. Nuclear Flux Intermediate Range	2	1	2 of 4 power	Maintain hot shutdown
			range channels	Note 2
			greater than	
			10% F.P.	
4. Nuclear Flux Source Range	2	1	1 of 2 inter-	Maintain hot shutdown
			mediate range	Note 2
			channels greater	
			than 10 ⁻¹⁰ amps	
5. Overtemperature ΔT	3	2		Maintain hot shutdown
6. Overpower ΔT	3	2		Maintain hot shutdown
7. Low Pressurizer Pressure	3	2		Maintain hot shutdown
8. Hi Pressurizer Pressure	2	1		Maintain hot shutdown
9. Pressurizer-Hi Water Level	2	1		Maintain hot shutdown
10. Low Flow in one loop	2/loop	1/loop		Maintain hot shutdown
(>10% F.P.)				
Low Flow both loops	2/loop	1/loop		
(>10% F.P.)				

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TABLE TS.3.5-2
(Page 2 of 2)

FUNCTIONAL UNIT	1 MINIMUM OPERABLE CHANNELS	2 MINIMUM DEGREE OF REDUNDANCY	3 PERMISSIBLE BYPASS CONDITIONS (1)	4 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET
11. Turbine Trip (Overspeed Protection)	2	1		Maintain <50% of rated power
12. Lo-Lo Steam Generator Water Level	2/loop	1/loop		Maintain hot shutdown
13. Undervoltage 4KV RCP Bus	1/bus	1/bus		Maintain hot shutdown
14. Underfrequency 4KV Bus	1/bus	1/bus		Maintain hot shutdown
15. Control Rod Misalignment Monitor				
a. Rod position deviation	1	-		Log data required by TS 3.10 I and TS 3. 10 J
b. Quadrant power tilt	1	-		
16. RCP Breakers Open	2	1		Maintain hot shutdown
17. Safety Injection Actuation Signal	2	1		Maintain hot shutdown
18. Lo Feedwater Flow	1/loop	1/loop		Maintain hot shutdown
19. Reactor Trip Breakers **	2	1		Notes 3, 4
20. Automatic Trip Logic**	2	1		Notes 3, 4

Note 1: Automatic permissives not listed

Note 2: When bypass condition exists, maintain normal operation

Note 3: With the number of operable channels one less than the minimum operable channels requirement, be in at least hot shutdown within 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.1, provided the other channel is operable.

Note 4: When in the hot shutdown condition with the number of operable channels one less than the minimum operable channels requirement, restore the inoperable channel to operable status within 48 hours or open the reactor trip breakers within the next hour.

F.P. = Full Power

* = One additional channel may be taken out of service for low power physics testing

** = Includes both undervoltage and shunt trip circuits

TABLE TS.3.5-2 (page 2 of 2)
REV

Channel Description	Check	Calibrate	Functional Response		Remarks
			Test	Test	
16. Refueling Water Storage Tank Level	W	R	M(1)	NA	1) Functional test can be performed by bleeding transmitter
17. Volume Control Tank	S	R	NA	NA	
18a. Containment Pressure SI Signal	S	R	M(1)	NA	Wide Range Containment Pressure 1) Isolation Valve Signal
18b. Containment Pressure Steam Line Isolation	S	R	M	NA	Narrow Range Containment Pressure
18c. Containment Pressure Containment Spray	S	R	M	NA	
18d. Annulus Pressure (Vacuum Breaker)	NA	R	R	NA	
19. Auto Load Sequencers	NA	NA	M	NA	
20. Boric Acid Make-up Flow Channel	NA	R	NA	NA	
21. Containment Sump Level	NA	R	R	NA	Includes Sumps A, B, and C
22. Accumulator Level and Pressure	S	R	R	NA	
23. Steam Generator Pressure	S	R	M	NA	
24. Turbine First Stage Pressure	S	R	M	NA	
25. Emergency Plan Radiation Instruments	*M	R	M	NA	Includes those named in the emergency procedure (referenced in Spec. 6.5 A.6.)
26a. Protection Systems Logic Channel Testing	NA	NA	M	NA	Includes reactor trip logic for both the undervoltage and shunt trips
26b. Reactor Trip Breakers	NA	NA	M	NA	Includes testing of both undervoltage and shunt trips
26c. Manual Reactor Trip	NA	NA	R	NA	Includes testing of both undervoltage and shunt trip circuits

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TABLE TS.4.1-2A
REV

MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

	<u>Test</u>	<u>Frequency</u>	<u>FSAR Section Reference</u>
1. Control Rod Assemblies	Rod drop times of full length rods	All rods during each refueling shutdown or following each removal of the reactor vessel head; affected rods following maintenance on or modification to the control rod drive system which could affect performance of those specific rods	7
1a. Reactor Trip Breakers	Open trip	Monthly	
2. Control Rod Assemblies	Partial movement of all rods	Every 2 weeks	7
3. Pressurizer Safety Valves	Set point	Per ASME Code, Section XI - Inservice Testing Program	
4. Main Steam Safety Valves	Set point	Per ASME Code, Section XI - Inservice Testing Program	
5. Reactor Cavity	Water level	Prior to moving fuel assemblies or control rods and at least once every day while the cavity is flooded.	-
6. Pressurizer PORV Block Valves	Functional	Quarterly	-
7. Pressurizer PORV's	Functional	Every 18 months	-
8. Deleted			
9. Primary System Leakage	Evaluate	Daily	4
10. Deleted			
11. Turbine stop valves, governor valves, and intercept valves. (Part of turbine overspeed protection.)	Functional	Monthly ⁽¹⁾	10
12. Deleted			

(1) This test may be waived for end of cycle operations when boron concentrations are less than 150 ppm provided more than 60 days do not elapse following the last test.