

Docket No. 50-423
B14823

Attachment 1

Millstone Nuclear Power Station, Unit No. 3
Proposed Revision to Technical Specifications
Reactor Trip System Instrumentation
Surveillance Requirement
Marked-Up Pages of Technical Specifications

May 1994

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
17. Reactor Trip System Interlocks (Continued)					
c. Power Range Neutron Flux, P-8	4	2	3	1	8
d. Power Range Neutron Flux, P-9	4	2	3	1	8
e. Power Range Neutron Flux, P-10	4	2	3	1, 2	8
18. Reactor Trip Breakers (2)	2 2	1 1	2 2	1, 2 3*, 4*, 5*	10, 13 11
19. Automatic Trip and Interlock Logic	2 2	1 1	2 2	1, 2 3*, 4*, 5*	13A 11
20. Three Loop Operation Bypass Circuitry	8 (1 switch per loop in each train)	2 (From different loop switches in bypass)	8	1, 2	1
21. Shutdown Margin Monitor	2	0	2	3, 4, 5	5

MILLSTONE - UNIT 3

3/4 3-4

Amendment No. 8, pp. 70

TABLE 3.3-1 (Continued)

TABLE NOTATIONS

- *When the Reactor Trip System breakers are in the closed position and the Control Rod Drive System is capable of rod withdrawal.
- **Above the P-7 (At Power) Setpoint.
- ***Above the P-9 (Reactor Trip/Turbine Trip Interlock) Setpoint.
- ##Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.
- ###Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.
- @ The Shutdown Margin monitor may be blocked during reactor startup in accordance with approved procedure.
- (1) The applicable MODES and ACTION statements for these channels noted in Table 3.3-3 are more restrictive and, therefore, applicable.
- (2) Including any reactor trip bypass breakers that are racked in and closed |

ACTION STATEMENTS for bypassing a reactor trip breaker.

ACTION 1 - With the number of OPERABLE channels one less than 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 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in the tripped condition within 6 hours,
- b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1, and
- c. Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER for four loop operation or 50% of RATED THERMAL POWER for three loop operation and the Power Range Neutron Flux Trip Setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER for four loop operation or 60% of RATED THERMAL POWER for three loop operation within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
18. Reactor Trip Breaker	N.A.	N.A.	N.A.	M(7, 11)	N.A.	1, 2, 3*, 4*, 5*
19. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	M(7)	1, 2, 3*, 4*, 5*
20. Three Loop Operation Bypass Circuitry	N.A.	N.A.	N.A.	R(20)	N.A.	1, 2
21. Reactor Trip Bypass Breaker	N.A.	N.A.	N.A.	M(15) R(16)	N.A.	1, 2, 3*, 4*, 5*
22. Shutdown Margin Monitor	N.A.	N.A.	Q(19)	N.A.	N.A.	3, 4, 5

MILLSTONE - UNIT 3
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3/4 3-12

Amendment No. 89, 79...

INSTRUMENTATIONBASESREACTOR TRIP SYSTEM INSTRUMENTATION and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

The Engineered Safety Features Actuation System senses selected plant parameters and determines whether or not predetermined limits are being exceeded. If they are, the signals are combined into logic matrices sensitive to combinations indicative of various accidents, events, and transients. Once the required logic combination is completed, the system sends actuation signals to those Engineered Safety Features components whose aggregate function best serves the requirements of the condition. As an example, the following actions may be initiated by the Engineered Safety Features Actuation System to mitigate the consequences of a steam line break or loss-of-coolant accident: (1) Safety Injection pumps start and automatic valves position, (2) Reactor trip, (3) feedwater isolation, (4) startup of the emergency diesel generators, (5) quench spray pumps start and automatic valves position, (6) containment isolation, (7) steam line isolation, (8) Turbine trip, (9) auxiliary feedwater pumps start, (10) service water pumps start and automatic valves position, and (11) Control room isolates.

Reactor Trip Breakers

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

These trip functions must be OPERABLE in MODE 1 or 2 when the reactor is critical. In MODE 3, 4, or 5, these RTS trip functions must be OPERABLE when the RTBs or associated bypass breakers are closed, and the CRD system is capable of rod withdrawal.

Docket No. 50-423
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Attachment 2

Millstone Nuclear Power Station, Unit No. 3
Proposed Revision to Technical Specifications
Reactor Trip System Instrumentation
Surveillance Requirement

Retyped Pages of Technical Specifications

May 1994

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
17. Reactor Trip System Interlocks (Continued)					
c. Power Range Neutron Flux, P-8	4	2	3	1	8
d. Power Range Neutron Flux, P-9	4	2	3	1	8
e. Power Range Neutron Flux, P-10	4	2	3	1,2	8
18. Reactor Trip Breakers ⁽²⁾	2 2	1 1	2 2	1, 2 3*, 4*, 5*	10, 13 11
19. Automatic Trip and Interlock Logic	2 2	1 1	2 2	1, 2 3*, 4*, 5*	10 11
20. Three Loop Operation Bypass Circuitry	8 (1 switch per loop in each train)	2 (From different loop switches in bypass)		1, 2	1
21. Shutdown Margin Monitor	2	0	2	3@, 4, 5	5

TABLE 3.3-1 (Continued)

TABLE NOTATIONS

*When the Reactor Trip System breakers are in the closed position and the Control Rod Drive System is capable of rod withdrawal.

**Above the P-7 (At Power) Setpoint.

***Above the P-9 (Reactor Trip/Turbine Trip Interlock) Setpoint.

##Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.

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

@ The Shutdown Margin monitor may be blocked during reactor startup in accordance with approved procedure.

(1) The applicable MODES and ACTION statements for these channels noted in Table 3.3-3 are more restrictive and, therefore, applicable.

(2) Including any reactor trip bypass breakers that are racked in and closed for bypassing a reactor trip breaker.

ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels one less than 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 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in the tripped condition within 6 hours,
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TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
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22. Shutdown Margin Monitor	N.A.	N.A.	Q(19)	N.A.	N.A.	3, 4, 5

INSTRUMENTATION

BASES

REACTOR TRIP SYSTEM INSTRUMENTATION and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

The Engineered Safety Features Actuation System senses selected plant parameters and determines whether or not predetermined limits are being exceeded. If they are, the signals are combined into logic matrices sensitive to combinations indicative of various accidents, events, and transients. Once the required logic combination is completed, the system sends actuation signals to those Engineered Safety Features components whose aggregate function best serves the requirements of the condition. As an example, the following actions may be initiated by the Engineered Safety Features Actuation System to mitigate the consequences of a steam line break or loss-of-coolant accident: (1) Safety Injection pumps start and automatic valves position, (2) Reactor trip, (3) feedwater isolation, (4) startup of the emergency diesel generators, (5) quench spray pumps start and automatic valves position, (6) containment isolation, (7) steam line isolation, (8) Turbine trip, (9) auxiliary feedwater pumps start, (10) service water pumps start and automatic valves position, and (11) Control Room isolates.

REACTOR TRIP BREAKERS

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