

Docket No. 50-423
B14672

Attachment 1

Millstone Unit No. 3
Proposed Revision to Technical Specifications

Reactor Coolant System Flow Rate
Markup Pages

November 1993

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
b. Three Loops Operating					
1) Channels I, II	10.0	6.80	1.71 + 1.33 (Temp + Press)	See Note 1	See Note 2
2) Channels III, IV	10.0	5.83	1.71 + 2.60 (Temp + Press)	See Note 1	See Note 2
8. Overpower ΔT	4.8	1.24	1.71	See Note 3	See Note 4
9. Pressurizer Pressure-Low	5.0	1.77	3.3	≥ 1900 psia	≥ 1890 psia
10. Pressurizer Pressure-High	5.0	1.77	3.3	≤ 2385 psia	≤ 2395 psia
11. Pressurizer Water Level-High	8.0	5.13	2.7	$\leq 89\%$ of instrument span	$\leq 90.7\%$ of instrument span
12. Reactor Coolant Flow-Low	2.5	1.52	0.78	$\geq 90\%$ of loop design flow*	$\geq 89.1\%$ of loop design flow*
13. Steam Generator Water Level Low-Low	18.10	16.64	1.50	$\geq 18.10\%$ of narrow range instrument span	$\geq 17.11\%$ of narrow range instrument span
14. General Warning Alarm	N.A.	N.A.	N.A.	N.A.	N.A.
15. Low Shaft Speed - Reactor Coolant Pumps	3.8	0.5	0	$\geq 95.8\%$ of rated speed	$\geq 92.5\%$ of rated speed

*Minimum Measured Flow Per Loop = 96,870 gpm (Four Loops Operating); 101,066 gpm (Three Loops Operating)

92,980

MILLSTONE - UNIT 3

2-6

Amendment No. 12, 31, 43, 60

POWER DISTRIBUTION LIMITS3/4.2.3 RCS FLOW RATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTORFOUR LOOPS OPERATINGLIMITING CONDITION FOR OPERATION

3.2.3.1 The indicated Reactor Coolant System (RCS) total flow rate and $F_{\Delta H}^N$ shall be maintained as follows:

a. RCS total flow rate \geq 371,920 ~~387,480~~ gpm, and

b. $F_{\Delta H}^N \leq F_{\Delta H}^{RTP} [1.0 + PF_{\Delta H} (1.0 - P)]$

Where:

- 1) $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$
- 2) $F_{\Delta H}^N$ - Measured values of $F_{\Delta H}^N$ obtained by using the movable incore detectors to obtain a power distribution map. The measured value of $F_{\Delta H}^N$ should be used since Specification 3.2.3.1b. takes into consideration a measurement uncertainty of 4% for incore measurement,
- 3) $F_{\Delta H}^{RTP}$ - The $F_{\Delta H}^N$ limit at RATED THERMAL POWER in the CORE OPERATING LIMITS REPORT (COLR),
- 4) $PF_{\Delta H}$ - The power factor multiplier for $F_{\Delta H}^N$ provided in the COLR, and
- 5) The measured value of RCS total flow rate shall be used since uncertainties of 2.4% for flow measurement have been included in Specification 3.2.3.1a.

APPLICABILITY: MODE 1.

ACTION:

With the RCS total flow rate or $F_{\Delta H}^N$ outside the region of acceptable operation:

- a. Within 2 hours either:
 1. Restore the RCS total flow rate and $F_{\Delta H}^N$ to within the above limits, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER and reduce the Power Range Neutron Flux - High Trip Setpoint to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.

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Attachment 2

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TOTAL ALLOWANCE (TA)</u>	<u>Z</u>	<u>SENSOR ERROR (S)</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
b. Three Loops Operating					
1) Channels I, II	10.0	6.80	1.71 + 1.33 (Temp + Press)	See Note 1	See Note 2
2) Channels III, IV	10.0	5.83	1.71 + 2.60 (Temp + Press)	See Note 1	See Note 2
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14. General Warning Alarm	N.A.	N.A.	N.A.	N.A.	N.A.
15. Low Shaft Speed - Reactor Coolant Pumps	3.8	0.5	0	$\geq 95.8\%$ of rated speed	$\geq 92.5\%$ of rated speed

*Minimum Measured Flow Per Loop = 92,980 gpm (Four Loops Operating); 101,066 gpm (Three Loops Operating)

POWER DISTRIBUTION LIMITS

3/4.2.3 RCS FLOW RATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR

FOUR LOOPS OPERATING

LIMITING CONDITION FOR OPERATION

3.2.3.1 The indicated Reactor Coolant System (RCS) total flow rate and $F_{\Delta H}^N$ shall be maintained as follows:

- a. RCS total flow rate $\geq 371,920$ gpm, and
- b. $F_{\Delta H}^N \leq F_{\Delta H}^{RTP} [1.0 + PF_{\Delta H} (1.0 - P)]$

Where:

- 1) $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}},$
- 2) $F_{\Delta H}^N$ = Measured values of $F_{\Delta H}^N$ obtained by using the movable incore detectors to obtain a power distribution map. The measured value of $F_{\Delta H}^N$ should be used since Specification 3.2.3.1b. takes into consideration a measurement uncertainty of 4% for incore measurement,
- 3) $F_{\Delta H}^{RTP}$ = The $F_{\Delta H}^N$ limit at RATED THERMAL POWER in the CORE OPERATING LIMITS REPORT (COLR),
- 4) $PF_{\Delta H}$ - The power factor multiplier for $F_{\Delta H}^N$ provided in the COLR, and
- 5) The measured value of RCS total flow rate shall be used since uncertainties of 2.4% for flow measurement have been included in Specification 3.2.3.1a.

APPLICABILITY: MODE 1.

ACTION:

With the RCS total flow rate or $F_{\Delta H}^N$ outside the region of acceptable operation:

- a. Within 2 hours either:
 1. Restore the RCS total flow rate and $F_{\Delta H}^N$ to within the above limits, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER and reduce the Power Range Neutron Flux - High Trip Setpoint to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.