

January 14, 1981

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION 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>
9. AUXILIARY FEEDWATER (1)					
a. Manual	1/pump	1/pump	1/pump	1, 2, 3	1
b. Steam Generator Level - Low	4	2	3	1, 2, 3	2

(1) For Cycle 12 only, OPERABILITY of the auxiliary feedwater (AFW) automatic initiation logic will rely on operator action to ensure successful initiation of AFW. Prior to startup for Cycle 13, modifications to the automatic initiation logic for AFW will be implemented to eliminate the reliance on operator action.

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MILLSTONE - UNIT 2

9406070085 PDR
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Amendment No. 1A, 1B, 1C

MILLSTONE - UNIT 2

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Amendment No.

XV, XVI, XVII, XVIII, XIX, XX

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

<u>FUNCTIONAL UNIT</u>	<u>TRIP VALUE</u>	<u>ALLOWABLE VALUES</u>
8. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level one	≥ 2912 volts	≥ 2877 volts
b. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level two	≥ 3700 volts with an 8.0 + 2.0 second time delay	≥ 3663 volts with an 8.0 + 2.0 second time delay
9. AUXILIARY FEEDWATER (1)		
a. Manual	Not Applicable	Not Applicable
b. Steam Generator Level - Low	$\geq 12\%$	$\geq 10\%$

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(1) For Cycle 12 only, OPERABILITY of the auxiliary feedwater (AFW) automatic initiation logic will rely on operator action to ensure successful initiation of AFW. Prior to startup for Cycle 13, modifications to the automatic initiation logic for AFW will be implemented to eliminate the reliance on operator action.

FEBRUARY 27, 1982

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMESINITIATING SIGNAL AND FUNCTIONRESPONSE TIME IN SECONDS

3. <u>Containment Pressure - High</u>	
a. Safety Injection (ECCS)	
1) High Pressure Safety Injection	≤ 25.0*/5.0**
2) Low Pressure Safety Injection	≤ 45.0*/5.0**
3) Charging Pumps	≤ 35.0*/35.0**
4) Containment Air Recirculation System	≤ 26.0*/15.0**
b. Containment Isolation	≤ 7.5
c. Enclosure Building Filtration System	≤ 45.0*/45.0**
d. Main Steam Isolation	≤ 6.9
e. Feedwater Isolation	≤ 14
4. <u>Containment Pressure--High-High</u>	
a. Containment Spray	≤ 35.6*(1)/16.0**(1)
5. <u>Containment Radiation-High</u>	
a. Containment Purge Valves Isolation	≤ Counting period plus 7.5
6. <u>Steam Generator Pressure-Low</u>	
a. Main Steam Isolation	≤ 6.9
b. Feedwater Isolation	≤ 14
7. <u>Refueling Water Storage Tank-Low</u>	
a. Containment Sump Recirculation	≤ 120
8. <u>Steam Generator Level-Low</u>	
a. Auxiliary Feedwater System (3)	≤ 240*/240**(2)

TABLE NOTATION

- * Diesel generator starting and sequence loading delays included.
- ** Diesel generator starting and sequence loading delays not included. Offsite power available.
- (1) Header fill time not included.
- (2) Includes 3-minute time delay.
- (3) See Insert A

INSERT A (for Table 3.3-5)

- (3) For Cycle 12 only, OPERABILITY of the auxiliary feedwater (AFW) automatic initiation logic will rely on operator action to ensure successful initiation of AFW. Prior to startup for Cycle 13, modifications to the automatic initiation logic for AFW will be implemented to eliminate the reliance on operator action.

Docket No. 50-336
B14859

Attachment 2

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications

Automatic Initiation of the Auxiliary Feedwater System
Retyped Pages

May 1994

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION 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>
9. AUXILIARY FEEDWATER ⁽¹⁾					
a. Manual	1/pump	1/pump	1/pump	1, 2, 3	1
b. Steam Generator Level - Low	4	2	3	1, 2, 3	2

(1) For Cycle 12 only, OPERABILITY of the auxiliary feedwater (AFW) automatic initiation logic will rely on operator action to ensure successful initiation of AFW. Prior to startup for Cycle 13, modifications to the automatic initiation logic for AFW will be implemented to eliminate the reliance on operator action.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
8. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level one	≥ 2912 volts	≥ 2877 volts
b. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level two	≥ 3700 volts with an 8.0 ± 2.0 second time delay	≥ 3663 volts with an 8.0 ± 2.0 second time delay
9. AUXILIARY FEEDWATER ⁽¹⁾		
a. Manual	Not Applicable	Not Applicable
b. Steam Generator Level - Low	≥ 12%	≥ 10%

(1) For Cycle 12 only, OPERABILITY of the auxiliary feedwater (AFW) automatic initiation logic will rely on operator action to ensure successful initiation of AFW. Prior to startup for Cycle 13, modifications to the automatic initiation logic for AFW will be implemented to eliminate the reliance on operator action.

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Millstone Unit No. 2

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Amendment No. 13, 16, 17,
63, 72,

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
3. <u>Containment Pressure - High</u>	
a. Safety Injection (ECCS)	
1) High Pressure Safety Injection	≤ 25.0*/5.0**
2) Low Pressure Safety Injection	≤ 45.0*/5.0**
3) Charging Pumps	≤ 35.0*/35.0**
4) Containment Air Recirculation System	≤ 26.0*/15.0**
b. Containment Isolation	≤ 7.5
c. Enclosure Building Filtration System	≤ 45.0*/45.0**
d. Main Steam Isolation	≤ 6.9
e. Feedwater Isolation	≤ 14
4. <u>Containment Pressure--High-High</u>	
a. Containment Spray	≤ 35.6* ⁽¹⁾ /16.0** ⁽¹⁾
5. <u>Containment Radiation-High</u>	
a. Containment Purge Valves Isolation	≤ Counting period plus 7.5
6. <u>Steam Generator Pressure-Low</u>	
a. Main Steam Isolation	≤ 6.9
b. Feedwater Isolation	≤ 14
7. <u>Refueling Water Storage Tank-Low</u>	
a. Containment Sump Recirculation	≤ 120
8. <u>Steam Generator Level-Low</u>	
a. Auxiliary Feedwater System ⁽³⁾	< 240*/240** ⁽²⁾

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

TABLE NOTATION

- * Diesel generator starting and sequence loading delays included.
- ** Diesel generator starting and sequence loading delays not included. Offsite power available.
- (1) Header fill time not included.
- (2) Includes 3-minute time delay.
- (3) For Cycle 12 only, OPERABILITY of the auxiliary feedwater (AFW) automatic initiation logic will rely on operator action to ensure successful initiation of AFW. Prior to startup for Cycle 13, modifications to the automatic initiation logic for AFW will be implemented to eliminate the reliance on operator action.