

Connecticut, in accordance with the procedures and limitations set forth in this renewed operating license;

- (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady-state reactor core power levels not in excess of 2700 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.301 are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

Renewed License No. DPR-65  
Amendment No301

TABLE 2.2-1  
REACTOR PROTECTIVE INSTRUMENTATION TRIP SETPOINT LIMITS

	<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
10.	Thermal Margin/Low Pressure (1) Four Reactor Coolant Pumps Operating	Trip setpoint adjusted to not exceed the limit lines of Figures 2.2-3 and 2.2-4 (4).	Trip setpoint adjusted to not exceed the limit lines of Figures 2.2-3 and 2.2-4 (4).
11.	Loss of Turbine--Hydraulic Fluid (3) Pressure - Low	≥ 500 psig	≥ 500 psig
12.	Wide Range Logarithmic Neutron Flux Monitor - Shutdown	Not Applicable	Not Applicable
13.	Reactor Protection System Logic Matrices	Not Applicable	Not Applicable
14.	Reactor Protection System Logic Matrix Relays	Not Applicable	Not Applicable
15.	Reactor Trip Breakers	Not Applicable	Not Applicable

TABLE NOTATION

- (1) Trip may be bypassed when logarithmic power is < 1E-04% and the bypass shall be capable of automatic removal whenever logarithmic power is < 1E-04%. Bypass shall be removed prior to raising logarithmic power to a value ≥ 1E-04%.
- (2) Trip may be manually bypassed when steam generator pressure is < 800 psia and all CEAs are fully inserted; bypass shall be automatically removed when steam generator pressure is ≥ 800 psia.
- (3) Trip may be bypassed below 15% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is ≥ 15% of RATED THERMAL POWER.
- (4) Calculations of the trip setpoint includes measurements, calculational and processor uncertainties, and dynamic allowances.
- (5) Each of four channels actuate on the auctioneered output of two transmitters, one from each steam generator.

### 3/4.3 INSTRUMENTATION

#### 3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

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3.3.1.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

##### SURVEILLANCE REQUIREMENTS

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4.3.1.1.1 Each reactor protective 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 4.3-1.

4.3.1.1.2 The bypass function and automatic bypass removal function shall be demonstrated OPERABLE during a CHANNEL FUNCTIONAL TEST once within 92 days prior to each reactor startup. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.1.1.3 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. Neutron detectors are exempt from response time testing. Each test shall include at least 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.

MILLSTONE - UNIT 2

3/4 3-2

Amendment No. 75, 116, 225, 289, 301

**TABLE 3.3-1****REACTOR PROTECTIVE 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>
1. Manual Reactor Trip	2	1	2	1, 2 and *	1
2. Power Level - High	4	2(f)	3	1, 2, 3(d)	2, 7, 8
3. Reactor Coolant Flow - Low	4	2(a)	3	1, 2	2, 7, 8
4. Pressurizer Pressure - High	4	2	3	1, 2	2
5. Containment Pressure - High	4	2	3	1, 2	2
6. Steam Generator Pressure - Low	4	2(b)	3	1, 2	2, 7, 8
7. Steam Generator Water Level - Low	4	2	3	1, 2	2
8. Local Power Density - High	4	2(c)	3	1	2, 7, 8
9. Thermal Margin/Low Pressure	4	2(a)	3	1, 2	2, 7, 8
10. Loss of Turbine - Hydraulic Fluid Pressure - Low	4	2(c)	3	1	2

TABLE 3.3-1 (Continued)

TABLE NOTATION

- \* With the protective system trip breakers in the closed position and the CEA drive system capable of CEA withdrawal.
- (a) Trip may be bypassed when logarithmic power is  $< 1E-04\%$  and the bypass shall be capable of automatic removal whenever logarithmic power is  $< 1E-04\%$ . Bypass shall be removed prior to raising logarithmic power to a value  $\geq 1E-04\%$ .
  - (b) Trip may be manually bypassed when steam generator pressure is  $< 800$  psia and all CEAs are fully inserted; bypass shall be automatically removed when steam generator pressure is  $\geq 800$  psia.
  - (c) Trip may be bypassed below 15% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is  $\geq 15\%$  of RATED THERMAL POWER.
  - (d) Trip does not need to be OPERABLE if all the control rod drive mechanisms are de-energized or if the RCS boron concentration is greater than or equal to the refueling concentration of Specification 3.9.1.
  - (e) DELETED
  - (f)  $\Delta T$  Power input to trip may be bypassed when logarithmic power is  $< 1E-04\%$  and the bypass shall be capable of automatic removal whenever logarithmic power is  $< 1E-04\%$ . Bypass shall be removed prior to raising logarithmic power to a value  $\geq 1E-04\%$ .

ACTION STATEMENTS

- ACTION 1 - 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 4 hours and/or open the protective system trip breakers.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may continue provided the following conditions are satisfied:
- a. The inoperable channel is placed in either the bypassed or tripped condition within 1 hour. The inoperable channel shall either be restored to OPERABLE status, or placed in the tripped condition, within 48 hours.
  - b. Within 1 hour, all functional units receiving an input from the inoperable channel are also declared inoperable, and the appropriate actions are taken for the affected functional units.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS

- c. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be removed from service for up to 48 hours, provided one of the inoperable channels is placed in the tripped condition.

ACTION 3 - NOT USED

ACTION 4 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, immediately verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1, and at least once per 4 hours thereafter.

ACTION 5 - 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 at least HOT STANDBY within the next 6 hours.

ACTION 6 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours.

ACTION 7 - With one automatic bypass removal channel inoperable for one or more functions, either

- a. disable the bypass channel within 1 hour, or
- b. place the affected trip units in bypass or trip within 1 hour, and either
  - 1. restore the bypass removal channel and affected trip units to OPERABLE status within 48 hours, or
  - 2. place the affected trip units in trip within 48 hours.

ACTION 8 - With two automatic bypass removal channels inoperable for one or more functions, either

- a. disable the bypass channels within 1 hour, or
- b. place one affected trip unit in bypass and place the other in trip for each affected trip function, within 1 hour, and  
restore one automatic bypass removal channel and the associated trip unit to OPERABLE status for each affected trip function, within 48 hours.

## INSTRUMENTATION

### 3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.2.1 The engineered safety feature actuation system instrumentation channels and bypasses 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:

- a. With an engineered safety feature actuation system instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, either adjust the trip setpoint to be consistent with the value specified in the Trip Setpoint column of Table 3.3-4 within 2 hours or declare the channel inoperable and take the ACTION shown in Table 3.3-3.
- b. With an engineered safety feature actuation system instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

#### SURVEILLANCE REQUIREMENTS

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4.3.2.1.1 Each engineered safety feature actuation system 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 4.3-2.

4.3.2.1.2 The bypass function and automatic bypass removal function shall be demonstrated OPERABLE during a CHANNEL FUNCTIONAL TEST once within 92 days prior to each reactor startup. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.