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Docket No. 50-336

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Northeast Nuclear Energy Company ATTN: Mr. D. C. Switzer, President P. O. Box 270

BJones (4)
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JMcGough

Hartford, Connecticut 06101

Gentlemen:

The Commission has issued the enclosed Amendment No. 15 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your applications dated June 8, 1976 and June 10, 1976.

The amendment will (1) correct the description of the steam generator instrumentation and (2) provide for a revised method for adjusting " ΔT power" and "nuclear power" instrumentation.

Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original signed by George Lear, Chief Operating Reactors Branch #3 Division of Operating Reactors

Enclosures:

- 1. Amendment No. 15
- 2. Safety Evaluation
- 3. Federal Register Notice

cc w/encls:
See next page

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cc:

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Northeast Nuclear Energy Company ATTN: Mr. F. W. Hartley Plant Superintendent Millstone Plant P. O. Box 127 Waterford, Connecticut 06385

Waterford Public Library Rope Ferry Road, Route 156 Waterford, Connecticut 06385



UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

THE CONNECTICUT LIGHT AND POWER COMPANY THE HARTFURD ELECTRIC LIGHT COMPANY WESTERN MASSACHUSETTS ELECTRIC COMPANY, AND NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 15 License No. DPR-65

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by The Connecticut Light and Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company, and Northeast Nuclear Energy Company (the licensees), dated June 8 and June 10, 1976, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

- 2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.
- 3. The license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear, Chief

Operating Reactors Branch #3 Division of Operating Reactors

Attachment: Changes to the Technical Specifications

Date of Issuance: September 2, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 15

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Pages

2-4

2-5

3/4 3-2

3/4 3-3 3/4 3-9

3/4 3-13

SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

2.2 LIMITING SAFETY SYSTEM SETTINGS

REACTOR TRIP SETPOINTS

2.2.1 The reactor protective instrumentation setpoints shall be set consistent with the Trip Setpoint values shown in Table 2.2-1.

APPLICABILITY: AS SHOWN FOR EACH CHANNEL IN TABLE 3.3-1.

ACTION:

With a reactor protective instrumentation setpoint less conservative than the value shown in the Allowable Values column of Table 2.2-1, declare the channel inoperable and apply the applicable ACTION statement requirement of Specification 3.3.1.1 until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

REACTOR PROTECTIVE INSTRUMENTATION TRIP SETPOINT LIMITS

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REACTOR PROTECTIVE INSTRUMENTATION TRIP SETPOINT LIMITS

<u>FU</u>	NCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
10	 Loss of Turbine Hydraulic Fluid Pressure - Low (3) 	≥ 500 psig	≥ 500 psig
	. Rate of Change of Power - High (4)	<pre>< 2.49 decades per minute</pre>	< 2.49 decades per m ite
12	. Steam Generator Water Level - High (5)	<u><</u> 85.40%	<u><</u> 85.40

TABLE NOTATION

- (1) Trip may be bypassed below 5% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is \geq 5% of RATED THERMAL POWER.
- (2) Trip may be manually bypassed below 600 psia; bypass shall be automatically removed at or above 600 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) Trip may be bypassed below $10^{-4}\%$ and above 12% of RATED THERMAL POWER.
- (5) Each of four channels actuate on the auctioneered output of two transmitters, one from each steam generator.

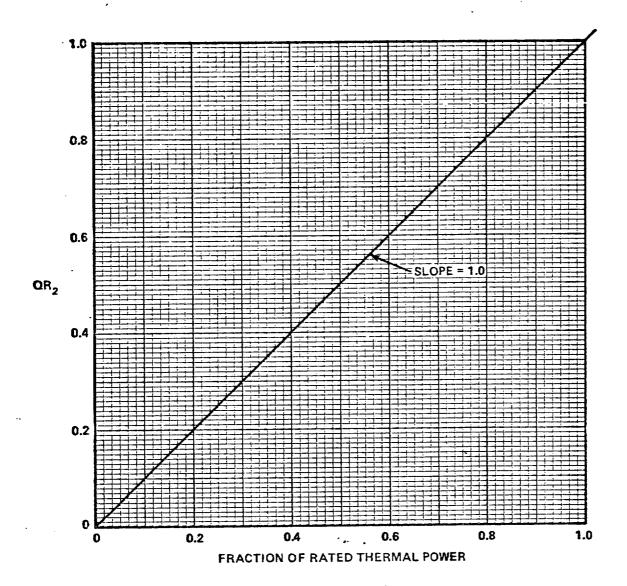


FIGURE 2.2-1

Local Power Density — High Trip Setpoint

Part 1 (Fraction of RATED THERMAL POWER Versus QR₂)

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Table 3.3-2.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

- 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 logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. 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. 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.

TABLE 3.3-1
REACTOR PROTECTIVE INSTRUMENTATION

ILLSTONE	FUN	CTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
ا =	1.	Manual Reactor Trip	2	1	2	1, 2 and *	1 2
UNIT 2	2.	Power Level - High	4	2 (f)	3	1, 2	2 .
	3.	Reactor Coolant Flow - Low	4	2(a)	3	1, 2 (e)	2
	4.	Pressurizer Pressure - High	4	2	3	1, 2	2
	5.	Containment Pressure - High	4	2	3	1, 2	2
3/4 3-	6.	Steam Generator Pressure - Low	4	2(b)	3	1, 2	2
~	7.	Steam Generator Water Level - Low	4	2	3	1, 2	2
	8.	Local Power Density - High	4	2(c)	3	1	2
	9.	Thermal Margin/Low Pressure	4	2(a)	3	1, 2 (e)	. 2
Amendr	10.	Loss of TurbineHydraulic Fluid Pressure - Low	4	2(c)	3	1	3

TABLE 3.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
11. Wide Range Logarithmic Neutron Flux Monitor a. Startup and OperatingRate of Change of Power - High	4	2(d)	3	1, 2 and *	3
b. Shutdown	4	0	2	3, 4, 5	4
12. Steam Generator Water Level - High	4	2	3	1, 2	3

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 below 5% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is > 5% of RATED THERMAL POWER.
- (b) Trip may be manually bypassed below 600 psia; bypass shall be automatically removed at or above 600 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 may be bypassed below $10^{-4}\%$ and above 12% of RATED THERMAL POWER.
- (e) Trip may be bypassed during testing pursuant to Special Test Exception 3.10.3.
- (f) Δ T Power input to trip may be passed below 5% of RATED THERMAL Power; bypass shall be automatically removed when THERMALPOWER is \geq 5% of RATED THERMAL POWER.

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 and with the THERMAL POWER level:

 - 5% of RATED THERMAL POWER, operation may continue with the inoperable channel in the bypassed condition, provided the following conditions are satisfied:

TABLE 4.3-1 (Continued)

TABLE NOTATION

- With reactor trip breaker closed.
- (1) If not performed in previous 7 days.
- (2) Heat balance only, above 15% of RATED THERMAL POWER; adjust "Nuclear Power Calibrate" potentiometers to make nuclear power signals agree with calorimetric calculation. During PHYSICS TESTS, these daily calibrations of nuclear power and ΔT power may be suspended provided these calibrations are performed upon reaching each major test power plateau and prior to proceeding to the next major test power plateau.
- (3) Above 15% of RATED THERMAL POWER, recalibrate the excore detectors which monitor the AXIAL SHAPE INDEX by using the incore detectors or restrict THERMAL POWER during subsequent operations to < 90% of the maximum allowed THERMAL POWER level with the existing Reactor Coolant Pump combination.
- (4) Above 15% of RATED THERMAL POWER, adjust "ΔT Pwr Calibrate" potentiometers to null "Nuclear Pwr ΔT Pwr". During PHYSICS TESTS, these daily calibrations of nuclear power and ΔT power may be suspended provided these calibrations are performed upon reaching each major test power plateau and prior to proceeding to the next major test power plateau.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

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 and with RESPONSE TIMES as shown in Table 3.3-5.

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

- 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 logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. 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.

MILLSTONE	FUNC	CTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
E - UNIT	4.	MAIN STEAM LINE ISOLATION					
17 2		Steam Generator Pressure - Low	4	2	3	1, 2, 3(c)	7
	5.	ENCLOSURE BUILDING FILTRAT (EBFAS) a. Manual EBFAS (Trip	ION				
		Buttons)	2	1	2	1, 2, 3, 4	6
3/4 3-13 A		b. Manual SIAS (Trip Buttons)	. 2	1	2	1, 2, 3, 4	6
		c. Containment Pressure - High	4	2	3	1, 2, 3	7
		d. Pressurizer Pressure - Low	4	2	3	1, 2, 3(a)	7
	6.	CONTAINMENT SUMP RECIRCULATION (SRAS) a. Manual SRAS (Trip					•
Amendment		Buttons) b. Refueling Water Storage			2	1, 2, 3, 4	6
nt N		Tank - Low	4	2	3	1, 2, 3	7

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUN	CTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7.	CONTAINMENT PURGE VALVES ISOLATION	•				,
	a. Manual CIAS (Trip Buttons)	2	1	2	1, 2, 3, 4	6
	b. Manual SIAS (Trip Buttons)	2	1	2	1, 2, 3, 4	6
	c. Automatic CIÀS Actuation Logic	2	. 1	2	1, 2, 3	6
	d. Containment Radiation High Gaseous Monitor Particulate Monitor	' - 1(d)	1(d) 1(d)	1	1, 2, 3, 4, 6 1, 2, 3, 4, 6	5 8 5 8
8.	LOSS OF POWER a. 4.16 kv Emergency E Undervoltage (Under voltage relays) - 1 one	`-	2/Bus	3/Bus	1, 2, 3	7
	b. 4.16 kv Emergency E Undervoltage (Under voltage relays) - 1 two	`-	2/Bus	3/Bus	1, 2, 3	7
		·	·	·		



UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION SUPPORTING AMENDMENT NO. 15 TO FACILITY OPERATING LICENSE NO. DPR-65 NORTHEAST NUCLEAR ENERGY CUMPANY MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2 DOCKET NO. 50-336

Introduction

On June 8, 1976 and June 10, 1976, Northeast Nuclear Energy Company (NNECO) made applications for license amendment to change the Technical Specifications for Millstone Unit No. 2. The proposed changes would (1) correct the description of the steam generator instrumentation, and (2) provide for a revised method for adjusting " ΔT power" and "nuclear power" instrumentation.

In the process of reviewing the June 8, 1976 and June 10, 1976 applications, we found it necessary to modify NNECO's proposed Technical Specifications. These modifications were made with the concurrence of NNECO.

Discussion and Evaluation

Our discussion and evaluation of NNECO's proposed Technical Specifications changes are contained in the following sections.

(1) Steam Generator Instrumentation

Steam generator instrumentation provides four reactor trip inputs to the Reactor Protective System (RPS). These four inputs are (1) Reactor Coolant Flow-Low, (2) Steam Generator Pressure-Low, (3) Steam Generator Water Level-Low, and (4) Steam Generator Water Level-High. Each of these four inputs, as described in Section 7.2.3.3 of the Millstone Unit No. 2 Final Safety Analysis Report (FSAR), has four independent instrumentation channels. Coincident signals from two channels of a given function are required to trip the reactor on that function; however, Table 3.3-1 of the Technical Specifications incorrectly states the number of channels for each of the four steam generator reactor trip inputs to the RPS.

NNECO has proposed to amend the description of the steam generator inputs to the RPS as contained in Table 3.3-1 referenced by Technical Specification 3.3.1.1 to correct the description of the RPS inputs as described in the FSAR. In addition, NNECO has proposed to change footnote number five in Table 2.2-1, to better describe the functioning of the steam generator RPS inputs.

We find the proposed changes to Technical Specifications 2.2.1 and 3.3.1.1 to be acceptable since they provide a description of the steam generator RPS inputs that is consistent with the FSAR. The revised footnote in Table 2.2-1 is an editorial change which in no way affects reactor safety.

(2) A Revised Method for Adjusting "AT Power" and "Nuclear Power"

Instrumentation

NNECO has proposed a change to Technical Specification 4.3.1.1.1 which describes a calibration technique to be used for ΔT power and nuclear power instrumentation; the higher value from these two instrumentations provides the input to the RPS overpower trip logic. At the present time, Technical Specification 4.3.1.1.1 requires the ΔT power instrumentation to be adjusted to agree with plant calorimetric calculations and subsequently adjust the nuclear power instrumentation to agree with the ΔT power calibration. NNECO has proposed to reverse the calibration order such that the nuclear power instrumentation is adjusted to agree with the plant calorimetric calculations and the ΔT power instrumentation is adjusted to agree with the nuclear power instrumentation. This proposal resulted from the need to avoid the excessive noise associated with the ΔT power instrumentation and its consequent unsatisfactory performance as a calibration standard.

We have reviewed NNECO's proposed change to Technical Specification 4.3.1.1.1 and find that the proposed calibration scheme does not affect the operation of the RPS overpower trip logic. Thus, we find the proposed change to the Technical Specifications to be acceptable since the consequences of postulated accidents involving overpower conditions are not more severe than previously evaluated.

Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR § 51.5(d)(4), that an environmental impact statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that:
(1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: September 2, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-336

NORTHEAST NUCLEAR ENERGY COMPANY,
THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY, AND
WESTERN MASSACHUSETTS ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 15 to Facility Operating License No. DPR-65 issued to Northeast Nuclear Energy Company, The Connecticut Light and Power Company, The Hartford Electric Light Company, and Western Massachusetts Electric Company, which revised Technical Specifications for operation of the Millstone Nuclear Power Station, Unit No. 2, located in the Town of Waterford, Connecticut. The amendment is effective as of the date of issuance.

The amendment will (1) correct the description of the steam generator instrumentation and (2) provide for a revised method for adjusting " ΔT power" and "nuclear power" instrumentation.

The applications for the amendment comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the applications for amendment dated June 8 and June 10, 1976, (2) Amendment No. 15 to License No. DPR-65, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Waterford Public Library, Rope Ferry Road, Waterford, Connecticut 06385.

A copy of items (2) and (3) may be obtained upon request addressed to the Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 2nd day of September, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear, Chief

Operating Reactors Branch #3 Division of Operating Reactors