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Docket No. 50-336

Northeast Nuclear Energy Company  
 ATTN: Mr. D. C. Switzer  
 President  
 P. O. Box 270  
 Hartford, Connecticut 06101

Gentlemen:

The Commission has issued the enclosed Amendment No. 27 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 application dated June 1, 1977, as supplemented by letters dated June 8, 1977 and June 15, 1977.

The amendment will modify the Technical Specifications so that satisfaction of the resistance temperature detector (RTD) surveillance requirements are not required until October 30, 1977.

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. 27
2. Safety Evaluation
3. Federal Register Notice

cc w/encls:  
 See next page

	<i>OT: R5B</i>					
	<i>R. Baer</i>					
	<i>6/17/77</i>					
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DATE >	6/16/77	6/16/77	6/17/77	6/18/77	6/16/77	6/17/77

*cont 1*  
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Northeast Nuclear Energy Company  
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John F. Kennedy Federal Building  
Boston, Massachusetts 02203

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 HARTFORD 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. 27  
License No. DPR-65

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application 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 1, 1977, as supplemented by letters dated June 8, 1977 and June 15, 1977, complies 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.

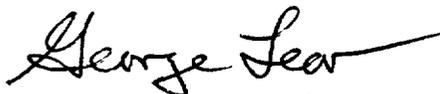
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 27, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This 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: June 17, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 27

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. The corresponding overleaf page 3/4 3-5 is also provided to maintain document completeness. No changes were made on 3/4 3-5.

Page

3/4 3-6

TABLE 3.3-1 (Continued)

ACTION STATEMENTS

1. All functional units receiving an input from the bypassed channel are also placed in the bypassed condition.
2. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be removed from service for up to 2 hours for surveillance testing per Specification 4.3.1.1 provided one of the inoperable channels is placed in the tripped condition.

- ACTION 3 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level:
- a.  $< 5\%$  of RATED THERMAL POWER, immediately place the inoperable channel in the bypassed condition, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above  $5\%$  of RATED THERMAL POWER.
  - b.  $> 5\%$  of RATED THERMAL POWER, power operation may continue.
- 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 or 3.1.1.2, as applicable, and at least once per 4 hours thereafter.

TABLE 3.3-2REACTOR PROTECTIVE INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
1. Manual Reactor Trip	≤ 2.0 seconds
2. Power Level - High	≤ 0.40 seconds*#
3. Reactor Coolant Flow - Low	≤ 0.65 seconds
4. Pressurizer Pressure - High	≤ 0.90 seconds
5. Containment Pressure - High	Not Applicable
6. Steam Generator Pressure - Low	≤ 0.90 seconds
7. Steam Generator Water Level - Low	≤ 0.90 seconds
8. Local Power Density - High	≤ 0.40 seconds*#
9. Thermal Margin/Low Pressure	≤ 0.90 seconds*#
10. Loss of Turbine--Hydraulic Fluid Pressure - Low	Not Applicable
11. Wide Range Logarithmic Neutron Flux Monitor	Not Applicable
12. Steam Generator Water Level - High	Not Applicable

\*Neutron detectors are exempt from response time testing. Response time of the neutron flux signal portion of the channel shall be measured from detector output or input of first electronic component in channel.

#The Surveillance Requirement to verify, pursuant to Specification 4.3.1.1.3, the RTD sensor response time portion of this functional unit may be extended from June 15, 1977, to no later than midnight, October 30, 1977.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 27 TO FACILITY OPERATING LICENSE NO. DPR-65  
NORTHEAST NUCLEAR ENERGY COMPANY  
MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2  
DOCKET NO. 50-336

INTRODUCTION

By letter dated June 1, 1977, Northeast Nuclear Energy Company (NNECO) proposed a change to the Technical Specifications of Facility Operating License DPR-65 for Millstone Nuclear Power Station, Unit No. 2. Supplemental information relating to the requested change was supplied by NNECO in their letters of June 8, 1977 and June 15, 1977. The proposed Technical Specification change would modify the acceptance criterion, expressed as response time, for the following reactor protective instrumentation: (1) power level-high; (2) local power density-high; and (3) thermal margin/low pressure.

DISCUSSION

The present Technical Specifications for Millstone Unit No. 2 require periodic demonstration that reactor protective instrumentation satisfies acceptance criteria which are expressed as response times. A reactor trip system response time is defined in the Technical Specifications as the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until electrical power is interrupted to the control element assembly (CEA) drive mechanism. However, the acceptance criteria specified in the Technical Specifications for three functional units did not correctly include the response characteristics of the relatively slow responding resistance temperature detectors (RTD) in each of the three units. These three functional units (power level-high, local power density-high, thermal margin/low pressure) all: (1) initiate a reactor trip and (2) use an RTD to measure reactor coolant temperature.

NNECO proposed in their submittal of June 1, 1977 that the Technical Specification acceptance criteria for the three functional units using RTDs be modified to include a specified RTD time constant. The RTD time constant is a measured parameter, which represents the RTD response with time to a known change in water temperature. The RTDs were tested during the spring 1977 outage and the RTD time constants determined. The staff has discussed the proposed Technical Specifications with NNECO and the staff has stated that they would prefer to consider alternate modifications to the Technical Specifications. Until the final format of the Technical Specifications can be

determined, the staff has indicated an interim Technical Specification change is acceptable. The interim change would modify the present Technical Specifications so that satisfaction of the RTD response time surveillance requirements is not required until October 30, 1977. During this interim period, the NRC will be reviewing in detail the setpoint methodology and the actual setpoints used in the Millstone 2 reactor protection system. NRC and NNECO will discuss and determine the most desirable method of specifying required RTD response in the Technical Specifications. NNECO concurred in our proposed method of modifying the Technical Specifications.

### EVALUATION

In support of their proposed Technical Specification change, NNECO supplied measured time constants for the reactor protective instrumentation RTDs. The measured time constants were determined from tests performed during the spring 1977 outage and indicate that the RTDs will respond to reactor coolant temperature variations in a satisfactory manner.

We have examined: (1) the RTD time constant test data and (2) the reactor system accidents and transients which are limited by RTD initiated reactor protective instrumentation. Based on our examination we have determined that an RTD response was included in the analysis of all applicable accidents and transients presented in the Millstone Unit No. 2 Final Safety Analysis Report (FSAR). We have also determined that the measured RTD time constants are consistent with the RTD time constant values used in the transients and accidents analyzed in the FSAR and approved by the staff.

Based on our evaluation of the RTD test data and the accidents and transients analyzed in the FSAR we have determined that: (1) the RTDs are performing in a manner which is consistent with the assumptions of previously analyzed accidents or transients, (2) the delay in actuation of reactor protective instrumentation attributable to the response of RTDs to variation in reactor coolant temperature has been included in all previously analyzed accidents and transients. Furthermore, the time dependent responses of the RTDs have been measured and it is not envisioned that further testing before the end of the next surveillance period will be required to satisfy the final form of the Technical Specifications to be adopted on or before October 30, 1977. The purpose of the interim Technical Specification is merely to provide a period of time in which the final format of the Technical Specification can be determined. Therefore, the interim change to the Technical Specifications will not significantly increase the probability or consequences of an accident or significantly decrease a safety margin. Hence, the change to the Technical Specifications is acceptable.

### 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 or negative declaration and 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: June 17, 1977

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

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 27 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 its issuance.

The amendment consists of changes which will modify the Technical Specifications so that satisfaction of the resistance temperature detector (RTD) response time surveillance requirements as they appear in the current Technical Specifications are not required until October 30, 1977.

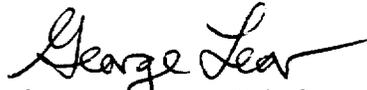
The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter 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 or negative declaration and 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 application for amendment dated June 1, 1977, as supplemented by letters dated June 8, 1977 and June 15, 1977, (2) Amendment No. 27 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 U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 17th day of June 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



George Lear, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors