Mr. Martin L. Bowling, Jr
Recovery Officer - Technical Services
Northeast Nuclear Energy Company
c/o Ms. Patricia A. Loftus
Director - Regulatory Affairs
P. O. Box 128
Waterford, Connecticut 06385

December 1 1998

SUBJECT: ISSUANCE OF AMENDMENT - MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2 (TAC NO. M93734)

Dear Mr. Bowling:

The Commission has issued the enclosed Amendment No. 221 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated September 19, 1995.

The amendment changes the Technical Specfications (TSs) surveillance for the safety injection tanks (SITs). The change was requested for TS Section 4.5.1.b. However, TS Section 4.5.1.b was subsequently changed to TS Section 4.5.1.d by Amendment No. 220 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, dated September 3, 1998, in response to your application dated August 23, 1995.

Specifically, the change reduces the frequency of the surveillance interval for boron concentration of the SITs in TS Section 4.5.1.d from once per 31 days to once every 6 months.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
Original signed by D. McDonald for:
Stephen Dembek, Project Manager
Millstone Project Directorate
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 221 to DPR-65
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 17, 1998

Mr. Martin L. Bowling, Jr.
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Northeast Nuclear Energy Company
c/o Ms. Patricia A. Loftus
Director - Regulatory Affairs
P. O. Box 128
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Daniel G. McDonald Jr.

for Stephen Dembek, Project Manager
Millstone Project Directorate
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Docket No. 50-336

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2. Safety Evaluation

cc w/encls: See next page

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Millstone Nuclear Power Station
Unit 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NORTHEAST NUCLEAR ENERGY COMPANY

THE CONNECTICUT LIGHT AND POWER COMPANY

THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 221
License No. DPR-65

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northeast Nuclear Energy Company, et al. (the licensee) dated September 19, 1995, 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.

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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 Appendix A, as revised through Amendment No. 221, 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 issuance, to be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

William M. Dean, Director
Millstone Project Directorate
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 17, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 221

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following page of the Appendix A, Technical Specifications, with the attached page. The revised page is identified by amendment number and contains vertical lines indicating the areas of change.

Remove	Insert
3/4 5-2	3/4 5-2

SURVEILLANCE REQUIREMENTS

4.5.1 Each SIT shall be demonstrated OPERABLE:

a. Verify each SIT isolation valve is fully open at least once per 12 hours.[1]

b. Verify borated water volume in each SIT is ≥ 1080 cubic feet and ≤ 1190 cubic feet at least once per 12 hours.[2]

c. Verify nitrogen cover-pressure in each SIT is ≥ 200 psig and ≤ 250 psig at least once per 12 hours.[3]

d. Verify boron concentration in each SIT is ≥ 1720 ppm at least once per 6 months, and once within 6 hours after each solution volume increase of ≥ 1% of tank volume[4] that is not the result of addition from the refueling water storage tank.

e. Verify that the closing coil in the valve breaker cubicle is removed at least once per 31 days.

f. Verify that the SIT isolation valves open automatically before the Reactor Coolant System pressure exceeds 1750 psia and on a safety injection signal at least once per 18 months.

---

(1) If one SIT is inoperable, <u>except</u> as a result of boron concentration not within limits <u>or</u> inoperable level or pressure instrumentation, surveillance is not applicable to the affected SIT.

(2) If one SIT is inoperable due solely to inoperable water level instrumentation, surveillance is not applicable to the affected SIT.

(3) If one SIT is inoperable due solely to inoperable pressure instrumentation, surveillance is not applicable to affected SIT.

(4) Only required to be performed for affected SIT.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 221

TO FACILITY OPERATING LICENSE NO. DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY

THE CONNECTICUT LIGHT AND POWER COMPANY

THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

By letter dated September 19, 1995, the Northeast Nuclear Energy Company, et al. (NNECO/the licensee), submitted a request to change the Millstone Nuclear Power Station, Unit No. 2 (MNPS-2), Technical Specifications (TSs). The requested change would reduce the frequency of the surveillance interval for the safety injection tanks (SITs) from once every 31 days to once every 6 months.

Specifically, the change was requested for TS Section 4.5.1.b. However, TS Section 4.5.1.b was subsequently changed to TS Section 4.5.1.d by Amendment No. 220 to Facility Operating License No. DPR-65, dated September 3, 1998, in response to your application dated August 23, 1995.

2.0 EVALUATION

The MNPS-2 has four SITs that are passive pressure vessels which are partially filled with borated water and pressurized with a nitrogen cover gas. During the blowdown phase of a design basis loss-of-coolant, the reactor coolant system will depressurize and the nitrogen cover gas will cause the SITs to inject into the reactor vessel via the cold legs. TS 4.5.1.d has a surveillance requirement to verify the boron concentration of each SIT solution at least once per 31 days to demonstrate that the SITs are operable.

The request to reduce the frequency of SIT boron concentration surveillance is a follow-up to NRC Inspection Report 50-336/92-35, dated March 3, 1993, which refers to the licensee evaluating the need for a TS change to reduce the frequency of the SIT surveillance which in turn would reduce the number of containment entries during power operation. The reduction in containment entries would reduce personnel radiological exposure in accordance with the licensee's policy to keep personnel exposures as-low-as-reasonably-achievable.

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The required minimum boron concentration of the SITs is 1720 parts per million (ppm). As stated in the licensee's submittal, the historical concentration data indicates that the boron concentration of the SITs has been greater than the required 1720 ppm during the period of 1981 through 1992, with the average and the lowest boron concentration being 1968 ppm and 1756 ppm, respectively. The two ways that SIT boron concentration can be reduced is through precipitation or dilution.

Precipitation occurs when the solution of borated water becomes so saturated that the boron settles out of the solution. The solubility limit of boric acid in water is 2.52 wt% at 32 °F, which corresponds to a boron concentration of approximately 4400 ppm. The boron concentration of the SITs is well below the solubility limit, which precludes boric acid concentration reduction due to boron precipitation.

Dilution occurs due to the addition of water containing a lower boron concentration than the SITs. A TS surveillance requirement to perform a boron concentration verification on a solution volume increase of ≥ 1 percent of the tank volume has previously been added to TS 4.5.1.d to guard against this phenomenon. This surveillance requirement ensures that the correct boron concentration is maintained and dilution will not occur.

3.0 SUMMARY

The NRC staff has reviewed the licensee's submittal requesting extension of the surveillance interval from every 31 days to every 6 months. The staff has determined that the proposed change to TS 4.5.1.d is acceptable. This determination is based on: (1) there is a TS surveillance requirement in the TSs to verify an SIT concentration anytime there is a change in a tank volume ≥ 1 percent, (2) the SIT boron concentration is well below the solubility limit of boron, (3) a change to an existing surveillance interval does not impact the Updated Final Safety Analysis Report, Chapter 14, transient analysis, and (4) personnel exposure to radiological exposure will be reduced.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (60 FR 54722 dated October 25, 1995). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Brewer

Date: December 17, 1998