Mr. Neil S. Carns
Senior Vice President
and Chief Nuclear Officer
Northeast Nuclear Energy Company
c/o Ms. Patricia A. Loftus
Director - Nuclear Licensing Services
P.O. Box 128
Waterford, CT 06385

November 19, 1997

SUBJECT: ISSUANCE OF AMENDMENT RELATING TO THE MAIN STEAM LINE CODE SAFETY VALVES TECHNICAL SPECIFICATIONS - MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2 (TAC NO. M99609)

Dear Mr. Carns:

The Commission has issued the enclosed Amendment No. 211 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated September 16, 1997.

The amendment changes the main steam line American Society of Mechanical Engineers Code (Code) safety valves Technical Specifications (TSs) by: (1) deleting TS Table 3.7.1, "Maximum Allowable Power Level-High Trip Setpoint with Inoperable Steam Line Safety Valves During Operation with Both Steam Generators," by not allowing operation in Mode 1 or 2 with inoperable Code safety valves while allowing operation in Mode 3 with up to three Code safety valves inoperable per steam generator, (2) modifing the associated action statement in TS 3.7.1.1 to reflect the operational changes, and (3) updating the TS Bases to reflect the proposed changes and include the correct amendment history numbers to reflect previously approved amendments.

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:
Daniel G. McDonald Jr., Sr. Project Manager
Special Projects Office - Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 211 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

November 19, 1997

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Director - Nuclear Licensing Services
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Docket No. 50-336

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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

AND WESTERN MASSACHUSETTS ELECTRIC COMPANY

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 211
License No. DPR-65

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

   A. The application for amendment filed by Northeast Nuclear Energy Company, et al. (the licensees) dated September 16, 1997, 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, Facility Operating License No. DPR-65 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. 211, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance to be implemented within 30 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Phillip F. McKee

Phillip F. McKee
Deputy Director for Licensing
Special Projects Office
Office of Nuclear Reactor Regulation

Attachment: Changes to Technical Specifications

Date of Issuance: November 19, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 211

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following pages of the Operating License and Appendix A, Technical Specifications, with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
3/4 7-1	3/4 7-1
3/4 7-2	3/4 7-2
B 3/4 7-1	B 3/4 7-1
B 3/4 7-2	B 3/4 7-2

3/4.7 PLANT SYSTEMS

3.4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. If one or more main steam line code safety valves are inoperable, restore the inoperable valve(s) to OPERABLE status within 4 hours, or be in HOT STANDBY within the next 6 hours.

b. If more than three main steam line code safety valves on a single steam generator are inoperable, be in HOT STANDBY within 6 hours, and HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Each main steam line code safety valve shall be demonstrated OPERABLE, with lift settings as shown in Table 4.7-1, in accordance with Specification 4.0.5.

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3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam line code safety valves ensures that the secondary system pressure will be limited to within 110% (1100 psig) of the design pressure of 1000 psig during the most severe anticipated system operational transient. The limiting anticipated system operational transient is the closure of a main steam line isolation valve (MSIV).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Code, 1971 Edition. The total rated capacity of the main steam line code safety valves is 12.7 x 10^6 lbs/hr. This is sufficient to relieve in excess of 100% steam flow at RATED THERMAL POWER.

Plant operation is allowed in MODE 3 with a maximum of three inoperable main steam line code safety valves per steam generator. In MODE 3, the total relieving capacity of the main steam line code safety valves, assuming three inoperable main steam line code safety valves per steam generator, is sufficient to remove the maximum possible decay heat load. Therefore, the remaining OPERABLE main steam line code safety valves have sufficient capacity to limit secondary system pressure to within 110% (1100 psig) of the design pressure of 1000 psig during the most severe anticipated system operational transient.

3/4.7.1.2 AUXILIARY FEEDWATER PUMPS

The OPERABILITY of the auxiliary feedwater pumps ensures that the Reactor Coolant System can be cooled down to less than 300°F from normal operating conditions in the event of a total loss of off-site power.

Any single motor driven or steam driven pump has the required capacity to provide sufficient feedwater flow to remove reactor decay heat and reduce the RCS temperature to 300°F where the shutdown cooling system may be placed into operation for continued cooldown.

3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank with the minimum water volume ensures that sufficient water is available for cooldown of the Reactor Coolant System to less than 300°F in the event of a total loss of off-site power. The minimum water volume is sufficient to maintain the RCS at HOT STANDBY conditions for 10 hours with steam discharge to atmosphere.

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 211

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 16, 1997, the Northeast Nuclear Energy Company, et al. (NNECO/licensee) submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 2, Technical Specifications (TSs). The proposed changes would modify the TSs for the main steam line American Society of Mechanical Engineers Code (Code) safety valves, hereinafter referred to as Code safety valves.

Specifically, NNECO proposes to: (1) delete TS Table 3.7.1, "Maximum Allowable Power Level-High Trip Setpoint with Inoperable Steam Line Safety Valves During Operation with Both Steam Generators," by not allowing operation in Mode 1 or 2 with inoperable Code safety valves while allowing operation in Mode 3 with up to three Code safety valves inoperable per steam generator, (2) modify the associated action statement in TS 3.7.1.1 to reflect the operational changes, and (3) update the TS Bases to reflect the proposed changes and include the correct amendment history numbers to reflect previously approved amendments.

2.0 BACKGROUND

Overpressure protection for the steam generators (shell side) and the main steam line piping (up to the turbine stop valves) is provided by 16 spring loaded Code safety valves. Each of the two steam generators has eight Code safety valves that are designed to limit the pressure to 110 percent of the design pressure. These Code safety valves also provide reactor core heat removal and design-basis accident mitigation.

During its effort to verify the current design and licensing bases for Millstone, Unit 2, NNECO has determined that the current maximum allowable power level high trip setpoints with inoperable Code safety valves specified in Table 3.7-1 of TS 3.7.1.1 are incorrect. The trip setpoints were not changed to be consistent with a previously approved reduction in the maximum power level high trip setpoint. In addition, NNECO is also in the process of reanalyzing the inadvertent closure of the main steam isolation valve (MSIV) and the loss of electrical load (LOEL) events. The results of the reanalysis indicate that the MSIV event results in the highest peak pressure in the secondary system and that the formula currently contained in the TS Bases for TS 3.7.1.1 may not result in the correct trip setpoints.

3.0 EVALUATION

The proposed deletion of TS Table 3.7-1 and changes to TS 3.7.1.1 will remove the ability to continue to operate in Mode 1 or 2 with inoperable Code safety valves while allowing operation in Mode 3 with up to three Code safety valves inoperable per steam generator. Four hours is still allowed to restore the inoperable Code safety valve(s) to operable status before power reduction to Hot Standby (Mode 3) is required while in Modes 1 and 2. Continuous operation in Mode 3 is allowed provided no more than three Code safety valves per steam generator are inoperable. If more than three Code safety valves on a single steam generator are inoperable the reactor must be in Hot Standby within 6 hours and Hot Shutdown within the next 12 hours.

The operability of the Code safety valves ensures that the secondary system pressure will be limited to within 110 percent (1100 psig) of the design pressure of 1000 psig during the most severe anticipated operational transient.

By letter dated October 6, 1980, the NRC issued Amendment No. 61 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2. The Amendment, among other things, modified the power level high trip setpoint from 107 percent to 106.6 percent. The TS Bases reflected the change; however, the setpoint values in TS Table 3.7-1 were not recalculated to reflect the new maximum power level. Thus, the current values in the table are incorrect for Modes 1 and 2 operation. In addition, the reanalysis of the MSIV and LOEL events indicates that the formula currently contained in TS Bases 3/4.7.1.1 may not be conservative for establishing the reduced power level high trip setpoints.

NNECO has verified that operation in Mode 3 with up to three inoperable Code safety valves per steam generator is acceptable. The reactor is at least 1 percent subcritical when operating in Mode 3. During operation in Mode 3, the power level high trip setpoint is an automatically variable setpoint and is at approximately 15 percent. The remaining five Code safety valves per steam generator are capable of removing the maximum possible decay heat load and maintaining the secondary system within 110 percent of the system design pressure for the most severe anticipated operational transient. NNECO also notes that the ability to operate in Mode 3 with inoperable Code safety valves provides flexibility for maintenance or repairs on the valves.

NNECO noted that previous Amendment Nos. 52, 61, and 63 had resulted in changes to the TS Bases, pages B 3/4 7-1 and B 3/4 7-2, but had not been added to the pages as amendment numbers or retained as history numbers. This inadvertent error will be corrected by including the appropriate amendment history numbers.

Therefore, on the basis of the previous discussion, the NRC staff has determined that the deletion of TS Table 3.7-1 and the proposed changes to TS 3.7.1.1 are acceptable. The staff has also determined that the changes to TS Bases pages B 3/4 7-1 and B 3/4 7-2 adequately reflect the changes and previous amendment history numbers.

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 a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 (62 FR 52582 dated October 8, 1997). 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: D. McDonald

Date: November 19, 1997