February 10, 2000

Mr. S. E. Scace - Director
Nuclear Oversight and Regulatory Affairs
c/o Mr. David A. Smith
Northeast Nuclear Energy Company
P. O. Box 128
Waterford, CT 06385-0128

SUBJECT: MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: RELOCATION OF TECHNICAL SPECIFICATIONS (TAC NO. MA6081)

Dear Mr. Scace:

The Commission has issued the enclosed Amendment No. 240 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated July 16, 1999.

The amendment would relocate Technical Specifications (TSs) 3/4.9.3.2, "Refueling Operations, Spent Fuel Temperature," 3/4.9.3.3, "Refueling Operations, Decay Time," 3/4.9.5, "Refueling Operation, Communications," 3/4.9.6, "Refueling Operation, Crane Operability - Containment Building," and 3/4.9.7, "Refueling Operations, Crane Travel - Spent Fuel Storage Building," to the Millstone, Unit No. 2 Technical Requirements Manual (TRM). The associated Bases pages and index pages will be modified to address the proposed change.

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,
/RA/
Jacob I. Zimmerman, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 240 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

February 10, 2000

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cc w/encls: See next page

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Unit 2

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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, ET AL.

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 240
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 July 16, 1999, 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 Appendix A, as revised through Amendment No. 240, 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, and shall be implemented within 60 days (including issuance of the updated Technical Requirements Manual for use by licensee personnel).

FOR THE NUCLEAR REGULATORY COMMISSION

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: February 10, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 240

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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

Remove	Insert
IX	IX
XIII	XIII
3/4 9-3a	3/4 9-3a
3/4 9-3b	3/4 9-3b
3/4 9-5	3/4 9-5
3/4 9-6	3/4 9-6
3/4 9-7	3/4 9-7
B 3/4 9-1a	B 3/4 9-1a
B 3/4 9-2	B 3/4 9-2

INDEX

LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS

INDEX

BASES

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3/4.9.4 CONTAINMENT PENETRATIONS

The requirements on containment penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

3/4.9.5 DELETED

3/4.9.6 DELETED

3/4.9.7 DELETED

3/4.9.8 SHUTDOWN COOLING AND COOLANT CIRCULATION

The requirement that at least one shutdown cooling loop be in operation at ≥ 1000 gpm ensures that (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor pressure vessel below 140°F as required during the REFUELING MODE, (2) sufficient coolant circulation is maintained through the reactor core to minimize the effects of a boron dilution incident and prevent boron stratification, and (3) is consistent with boron dilution analysis assumptions.

The requirement to have two shutdown cooling loops OPERABLE when the refuel pool is unavailable as a heat sink ensures that a single failure of the operating shutdown cooling loop will not result in a complete loss of decay heat removal capability. With the reactor vessel water level at or above the vessel flange, the reactor vessel pit seal installed, and a combined available volume of water in the refueling pool and refueling water storage tank in excess of 370,000 gallons, a large heat sink is readily available for core cooling. Adequate time is thus available to initiate emergency procedures to provide core cooling in the event of a failure of the operating shutdown cooling loop.

3/4.9.9 and 3/4.9.10 CONTAINMENT RADIATION MONITORING AND CONTAINMENT PURGE VALVE ISOLATION SYSTEM

The OPERABILITY of these systems ensures that the containment purge valves will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of these systems is required to restrict the release of radioactive material from the containment atmosphere to the environment.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 240

TO FACILITY OPERATING LICENSE NO. DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

By application dated July 16, 1999, the Northeast Nuclear Energy Company (NNECO or the licensee) proposed an amendment to the Appendix A Technical Specifications (TSs) for the Millstone Nuclear Power Station, Unit 2. The proposed amendment will relocate TSs 3/4.9.3.2, "Refueling Operations, Spent Fuel Temperature," 3/4.9.3.3, "Refueling Operations, Decay Time," 3/4.9.5, "Refueling Operation, Communications," 3/4.9.6, "Refueling Operation, Crane Operability - Containment Building," and 3/4.9.7, "Refueling Operations, Crane Travel - Spent Fuel Storage Building," to the Millstone, Unit No. 2 Technical Requirements Manual (TRM). The associated Bases pages and index pages will be modified to address the proposed change.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act of 1954, as amended (the Act) requires applicants for nuclear power plant operating licenses to include TSs as part of the license. The Commission's regulatory requirements related to the content of TSs are set forth in 10 CFR 50.36. The regulation requires that the TSs include items in five specific categories, including (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation (LCO); (3) surveillance requirements; (4) design features; and (5) administrative controls. The regulation does not specify the particular requirements to be included in the TSs.

The four criteria defined by 10 CFR 50.36(c)(2)(ii) for determining whether a particular matter is required to be included in the TS LCOs, are as follows:

(1) Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;

(2) a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of, or presents a challenge to the integrity of a fission product barrier;

(3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of, or presents a challenge to the integrity of a fission product barrier;

(4) a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Existing TS LCOs which fall within or satisfy any of the above criteria must be retained in the TSs; those which do not fall within or satisfy these criteria may be relocated to other licensee-controlled documents.

3.0 EVALUATION

3.1 TS 3/4.9.3.2 Refueling Operations, Spent Fuel Pool Temperature

This specification ensures that the design temperature of the spent fuel pool cooling system, lining/building structures, and spent fuel storage racks is not exceeded. The licensee has evaluated the proposed change against the criteria in 10 CFR 50.36 and determined that the TS does not meet the criteria for requiring establishment of an LCO. The NRC staff has reviewed the licensee's evaluation and found their determination that an LCO is not required to be acceptable since the existing TS does not meet the criteria in 10 CFR 50.36 for required TS LCOs.

The staff also reviewed the NRC's guidance to the vendor owner's groups that documented which TSs must be included in new Standard Technical Specifications (STS). The determination for which TS must be retained in the new STS is in the Commission's Interim Policy Statement on Technical Specification Improvements and in several interpretations of how to apply the criteria contained in the Policy Statement. This TS was not identified as a TS LCO to be retained in Combustion Engineering Standard Technical Specification (CESTS). Relocating this TS to the Millstone, Unit 2 TRM will permit the licensee to control future changes pursuant to 10 CFR 50.59.

Based on the above information the staff finds this change to be acceptable.

3.2 TS 3/4.9.3.3, Refueling Operations, Decay Time

This specification requires the reactor to be maintained in MODE 5 or 6 until all spent fuel assemblies in the spent fuel pool have been subcritical for at least 504 hours. The licensee has evaluated the proposed change against the criteria in 10 CFR 50.36 and determined that the TS does not meet the criteria for requiring establishment of an LCO. The NRC staff has reviewed the licensee's evaluation and found acceptable their determination that an LCO is not required since the existing TS does not meet the criteria in 10 CFR 50.36 for required TS LCOs.

The licensing bases for the decay time, 504 hours, in the FSAR is to ensure that the shutdown cooling system would be available for supplemental cooling to the spent fuel pool, and not committed to its emergency core cooling function. This is consistent with Technical Specification Bases 3/4.9.3. Therefore, the requirement is not relied upon for mitigating a fuel

handling accident and does not meet the criteria that would require establishment of an LCO. Based on the above, the staff finds it acceptable to relocate TS 3/4.9.3.3 to the licensee's TRM.

3.3 TS 3/4.9.5 Refueling Operation, Communication

TS 3/4.9.5 LCO requires maintaining direct communications between the control room and personnel at the refueling station during fuel or control element assembly (CEA) movement within the reactor pressure vessel while in Mode 6. The basis for this requirement is to ensure that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during fuel or CEA movement within the reactor pressure vessel.

The FSAR does not specifically address communication in this context and does not include communication in the monitoring instrumentation needed to alert personnel of conditions that would be of concern such as degraded ability to remove decay heat or excessive radiation levels. This LCO was identified as a candidate for relocation in the CESTS and the staff's review of this LCO indicates that it does not meet the criteria requiring establishment of an LCO. Based on this review, the staff finds relocation of TS 3/4.9.5 to the licensee's TRM acceptable.

3.4 TS 3/4.9.6 Refueling Operations, Crane Operability - Containment Building

TS 3/4.9.6 LCO defines the minimum capacity and overload cutoff limits for the containment building cranes (refueling machine), used for the movement of fuel assemblies, to be considered operable during the movement of fuel. The TS bases state that the operability requirements for cranes that are used to move fuel assemblies ensures that each crane has sufficient load capacity to lift a fuel element, and the core internals and pressure vessel are protected from excessive force in the event they are inadvertently engaged during lifting operations.

The relocation of the LCO requirements related to the refueling cranes' operability is acceptable as it is not an LCO that satisfies the criteria of 10 CFR 50.36. Further, there is no accident analysis based on the minimum capacity and overload cutoff limits of the cranes. Based on the above, the staff's review finds relocation of the TS to the licensee's TRM acceptable.

3.5 TS 3/4.9.7 Refueling Operations, Crane Travel - Spent Fuel Storage Building

TS 3/4.9.7 LCO prohibits loads in excess of 1800 pounds from travel over irradiated fuel assemblies in the storage pool, with the exception of the consolidated fuel storage box, during all crane operation. This restriction ensures that no more than the contents of one fuel assembly will rupture in the event of a fuel handling accident. The loading restrictions are within the design capabilities of the associated cranes. The bounding accident analyses demonstrate acceptable radiological consequences even if a fuel assembly or fuel storage box were dropped into the spent fuel pool, based on the secondary containment capabilities and filtration capacity of the safety-related ventilation system. Consequently, the travel and loading restrictions of the cranes are not necessary to prevent or mitigate fuel handling accidents and therefore, do not satisfy the TS LCO criteria of 10 CFR 50.36.

Based on the above, the staff finds relocation of TS 3/4.9.5 to the licensee's TRM acceptable.

3.6 Index and Bases Pages

The changes to the Index and Bases pages are included for issuance with this amendment.

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 permits changes to be made to certain operational limits and 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 (64 FR 54378). 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: R. Eaton

Date: February 10, 2000