

December 31, 1998

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

SUBJECT: ISSUANCE OF AMENDMENT - MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2 (TAC NO. M92879)

Dear Mr. Bowling:

The Commission has issued the enclosed Amendment No. 223 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated August 4, 1998.

The amendment changes the Technical Specifications (TSs) relating to the condensate storage tank (CST) and also adds a new TS that establishes requirements for the atmospheric steam dump valves (ASDVs) to assure their operability. The applicable TS Bases for the CST is updated to reflect the proposed changes and a new TS Bases section is added to discuss the new TS for the ASDVs.

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,

Stephen Dembek
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. 223to 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 31, 1998

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

SUBJECT: ISSUANCE OF AMENDMENT - MILLSTONE NUCLEAR POWER STATION, UNIT
NO. 2 (TAC NO. MA2441)

Dear Mr. Bowling:

The Commission has issued the enclosed Amendment No. 223 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated August 4, 1998.

The amendment changes the Technical Specifications (TSs) relating to the condensate storage tank (CST) and also adds a new TS that establishes requirements for the atmospheric steam dump valves (ASDVs) to assure their operability. The applicable TS Bases for the CST is updated to reflect the proposed changes and a new TS Bases section is added to discuss the new TS for the ASDVs.

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,

A handwritten signature in cursive script that reads "Stephen Dembek".

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. 223 to DPR-65
2. Safety Evaluation

cc w/encs: See next page

Millstone Nuclear Power Station
Unit 2

cc:

Lillian M. Cuoco, Esquire
Senior Nuclear Counsel
Northeast Utilities Service Company
P. O. Box 270
Hartford, CT 06141-0270

Mr. John Buckingham
Department of Public Utility Control
Electric Unit
10 Liberty Square
New Britain, CT 06051

Edward L. Wilds, Jr., Ph.D.
Director, Division of Radiation
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

First Selectmen
Town of Waterford
15 Rope Ferry Road
Waterford, CT 06385

Mr. Wayne D. Lanning, Director
Millstone Inspections
Office of the Regional Administrator
475 Allendale Road
King of Prussia, PA 19406-1415

Charles Brinkman, Manager
Washington Nuclear Operations
ABB Combustion Engineering
12300 Twinbrook Pkwy, Suite 330
Rockville, MD 20852

Senior Resident Inspector
Millstone Nuclear Power Station
c/o U.S. Nuclear Regulatory Commission
P.O. Box 513
Niantic, CT 06357

Mr. F. C. Rothen
Vice President - Nuclear Work Services
Northeast Utilities Service Company
P. O. Box 128
Waterford, CT 06385

Ernest C. Hadley, Esquire
1040 B Main Street
P.O. Box 549
West Wareham, MA 02576

Mr. Raymond P. Necci
Vice President - Nuclear Oversight
and Regulatory Affairs
Northeast Utilities Service Company
P. O. Box 128
Waterford, CT 06385

Mr. John Carlin
Vice President - Human Services
Northeast Utilities Service Company
P. O. Box 128
Waterford, CT 06385

Mr. Allan Johanson, Assistant Director
Office of Policy and Management
Policy Development and Planning
Division
450 Capitol Avenue - MS# 52ERN
P. O. Box 341441
Hartford, CT 06134-1441

Mr. M. H. Brothers
Vice President - Millstone Operations
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385

Mr. J. A. Price
Director - Unit 2
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385

Millstone Nuclear Power Station
Unit 2

cc:

Mr. Leon J. Olivier
Chief Nuclear Officer - Millstone
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385

Citizens Regulatory Commission
ATTN: Ms. Susan Perry Luxton
180 Great Neck Road
Waterford, CT 06385

Deborah Katz, President
Citizens Awareness Network
P. O. Box 83
Shelburne Falls, MA 03170

The Honorable Terry Concannon
Co-Chair
Nuclear Energy Advisory Council
Room 4035
Legislative Office Building
Capitol Avenue
Hartford, CT 06106

Mr. Evan W. Woollacott
Co-Chair
Nuclear Energy Advisory Council
128 Terry's Plain Road
Simsbury, CT 06070

Little Harbor Consultants, Inc.
Millstone - ITPOP Project Office
P. O. Box 0630
Niantic, CT 06357-0630

Mr. Daniel L. Curry
Project Director
Parsons Power Group Inc.
2675 Morgantown Road
Reading, PA 19607

Attorney Nicholas J. Scobbo, Jr.
Ferriter, Scobbo, Caruso, Rodophele, PC
1 Beacon Street, 11th Floor
Boston, MA 02108

Mr. J. P. McElwain
Recovery Officer - Millstone Unit 2
Northeast Nuclear Energy Company
P. O. Box 128
Waterford, Connecticut 06385



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. 223
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 August 4, 1998, 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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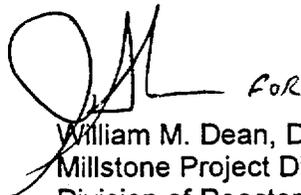
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 223 , 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

A handwritten signature in black ink, appearing to be 'W. M. Dean', with the initials 'for' written to the right of the signature.

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 31, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 223

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following pages of the 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

VIII

VIII

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3/4 7-6

3/4 7-9c

B 3/4 7-2

B 3/4 7-2

B 3/4 7-3a

B 3/4 7-3a

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PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank shall be OPERABLE with a minimum contained volume of 165,000 gallons. |

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With less than 165,000 gallons of water in the condensate storage tank, within 4 hours either: |

- a. Restore the water volume to within the limit or be in HOT SHUTDOWN within the next 12 hours, or
- b. Demonstrate the OPERABILITY of the fire water system as a backup supply to the auxiliary feedwater pumps and restore the condensate storage tank water volume to within its limits within 7 days or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the water level.

PLANT SYSTEMS

ATMOSPHERIC STEAM DUMP VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.7 Each atmospheric steam dump valve shall be OPERABLE.

APPLICABILITY MODES 1, 2, and 3.

ACTION:

- a. With one atmospheric steam dump valve inoperable, restore the inoperable valve to OPERABLE status within 7 days or be in MODE 3 within the next 6 hours and MODE 4 within the following 24 hours.
- b. With more than one atmospheric steam dump valve inoperable, restore one inoperable valve to OPERABLE status within 24 hours or be in MODE 3 within the next 6 hours and MODE 4 within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.7 Verify one complete cycle of each atmospheric steam dump valve at least once per 18 months.

PLANT SYSTEMS

BASES

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. The contained water volume limit includes an allowance for water not usable due to discharge nozzle pipe elevation above tank bottom, plus an allowance for vortex formation.

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

PLANT SYSTEMS

BASES

a feedwater isolation signal since the steam line break accident analysis credits them in prevention of feed line volume flashing in some cases. Since the block valves are not credited with isolation, they are not required to operate as fast as the isolation valves although equal response times for all valves are specified. Feedwater pumps are assumed to trip immediately with an MSI signal.

3/4.7.1.7 ATMOSPHERIC STEAM DUMP VALVES

The atmospheric steam dump valves (ASDVs) provide a method for maintaining the unit in HOT STANDBY, and to cool the unit to Shutdown Cooling (SDC) System entry conditions if heat removal by the condenser steam dump valves is not available. The ASDVs are normally operated from the main control room. Local manual operation of the ASDVs is provided. The ASDVs are OPERABLE as long as the valves can be opened from the control room, or locally at the valves.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200-psig are based on a steam generator RT_{NDT} of 50°F and are sufficient to prevent brittle fracture.

3/4.7.3 REACTOR BUILDING CLOSED COOLING WATER SYSTEM

The OPERABILITY of the reactor building closed cooling water system ensures that sufficient cooling capacity is available for continued operation of vital components and Engineered Safety Feature equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident analyses.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 223

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 August 4, 1998, the Northeast Nuclear Energy Company, et al. (the licensee), submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 2 (MNPS-2) Technical Specifications (TSs). The requested changes would change the TS requirements relating to the condensate storage tank (CST) and also add a new TS that would establish requirements for the atmospheric steam dump valves (ASDVs) to assure their operability. The applicable TS Bases for the CST would also be modified to reflect the proposed changes and a new TS Bases Section would be added to discuss the new TS for the ASDVs.

2.0 EVALUATION

The first portion of the amendment request would modify TS 3.7.1.3, "Plant Systems - Condensate Storage Tank," by increasing the minimum required CST level from 150,000 gallons to 165,000 gallons to account for the discharge nozzle pipe elevation above the tank bottom and vortex formation occurring in the CST at the auxiliary feedwater (AFW) system supply piping entrance.

The CST is required to maintain an adequate volume of water for the following three conditions, to: (1) remove decay heat and sensible heat to cool down the plant to less than 300 °F following a loss of offsite power (LOOP) event; (2) remove only decay heat to maintain the plant in a hot standby condition for 10 hours; and (3) remove decay heat and sensible heat to be able to cope with an 8-hour station blackout (SBO) event.

Conditions 1 and 3 require 136,000 gallons of water and Condition 2 requires 115,000 gallons of water. These requirements are well within the current TS requirement of 150,000 gallons; however, there is an unusable volume of water in the CST due to the location of the discharge nozzle and vortex formation occurring in the CST where the AFW system supply piping enters.

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The licensee has determined that the unusable volume of water due to the location of the discharge nozzle is approximately 15,000 gallons and the unusable volume of water due to the vortex formation is approximately 8,000 gallons for a total volume of 23,000 gallons of unusable water in the CST. Conditions 1 and 3 require a total CST volume of 159,000 gallons of water and Condition 2 requires 138,000 gallons of water when the unusable water in the CST is taken into consideration. Thus, the current requirement of 150,000 gallons is not adequate for Conditions 1 and 3. The applicable TS Bases section will be updated to reflect the proposed change in the CST water volume to account for the unusable stored water.

The proposed change to TS 3.7.1.3 will increase the minimum allowable volume of water in the CST to 165,000 gallons, which bounds the amount of water needed for the conditions noted above, and also includes a margin of about 6,000 gallons. This change is well within the total capacity of the CST, which is 250,000 gallons, and the TS required volume of water will be stored within the missile protected portion (205,000 gallon-level) of the CST.

Therefore, the NRC staff has determined, based on the previous discussion, that the proposed change to TS 3.7.1.3 relating to the required minimum water volume in the CST is acceptable. The updated TS Bases adequately reflect the proposed TS change.

The second portion of the request would add a new TS section, TS 3.7.1.7, "Plant Systems - Atmospheric Steam Dump Valves," to provide the requirements necessary to assure that the ASDVs will be available to remove heat from the reactor coolant system (RCS) to either maintain the unit in hot standby or cool down the unit to shutdown cooling (SDC) entry conditions if the condenser steam dump valves are not available.

The atmospheric steam dump system at MNPS-2 consists of one ASDV for each of the two steam generators. The design does not include remotely controlled block valves to isolate the ASDVs, however, each of the ASDVs can be isolated by a local manually controlled isolation valve.

Proposed TS 3.7.1.7 requires each of the two ASDVs to be operable in Modes 1, 2, and 3. If one ASDV is inoperable, it has to be restored to operable within 7 days or be in Mode 3 in the next 6 hours and Mode 4 within the following 24 hours. If both the ASDVs are inoperable, one has to be restored to operable within 24 hours or be in Mode 3 within the next 6 hours and in Mode 4 within the following 24 hours. The 24 hours reflects the potential impact on plant cooldown time with one or both ASDVs inoperable.

Proposed TS 4.7.1.7 requires that one complete cycle of each ASDV be verified at least once per 18 months.

Proposed TS 3.7.1.7 and TS 4.7.1.7 constitute additional limitations, restrictions, or controls not presently included in the TSs, and are consistent, to the extent practical, with the guidance provided in NUREG-1432, Rev. 1, "Standard Technical Specifications Combustion Engineering Plants," dated April 1995. The proposed TSs are, therefore, acceptable. The new TS Bases, 3/4.7.1.7, adequately reflect the new TSs.

3.0 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.

4.0 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 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and 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 (63 FR 45526 dated August 26, 1998). 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.

5.0 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 Contribution: D. McDonald

Date: December 31, 1998