

October 14, 1994

Mr. John F. Opeka
Executive Vice President, Nuclear
Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, CT 06141-0270

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M89440)

Dear Mr. Opeka:

The Commission has issued the enclosed Amendment No. 180 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated May 6, 1994, supplemented by letter dated August 16, 1994.

The amendment modifies the Limiting Conditions for Operation (LCO) for the Millstone Unit 2 Technical Specifications (TS) 3.8.2.3 and 3.8.2.4 and the Surveillance Requirements of TS 4.8.2.3.2.c.3. These changes relate to the amperage requirements and the charging capability of the DC distribution systems.

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

Sincerely,

Original signed by

Guy S. Vissing, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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Docket No. 50-336

- Enclosures: 1. Amendment No. 180 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

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Sincerely,

A handwritten signature in cursive script, reading "Guy S. Vissing".

Guy S. Vissing, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-336

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2. Safety Evaluation

cc w/encls: See next page

Mr. John F. Opeka
Northeast Nuclear Energy Company

Millstone Nuclear Power Station
Unit 2

cc:

Ms. L. M. Cuoco, Senior Nuclear Counsel
Northeast Utilities Service Company
Post Office Box 270
Hartford, Connecticut 06141-0270

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

J. J. LaPlatney
Haddam Neck Unit Director
Connecticut Yankee Atomic Power Company
362 Injun Hollow Road
East Hampton, Connecticut 06424-3099

First Selectmen
Town of Waterford
Hall of Records
200 Boston Post Road
Waterford, Connecticut 06385

Kevin T. A. McCarthy, Director
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

P. D. Swetland, Resident Inspector
Millstone Nuclear Power Station
c/o U.S. Nuclear Regulatory Commission
Post Office Box 513
Niantic, Connecticut 06357

Allan Johanson, Assistant Director
Office of Policy and Management
Policy Development and Planning Division
80 Washington Street
Hartford, Connecticut 06106

Donald B. Miller, Jr.
Senior Vice President
Millstone Station
Northeast Nuclear Energy Company
Post Office Box 128
Waterford, Connecticut 06385

S. E. Scace, Vice President
Nuclear Operations Services
Northeast Utilities Service Company
Post Office Box 128
Waterford, Connecticut 06385

G. H. Bouchard, Nuclear Unit Director
Millstone Unit No. 2
Northeast Nuclear Energy Company
Post Office Box 128
Waterford, Connecticut 06385

Nicholas S. Reynolds
Winston & Strawn
1400 L Street, NW
Washington, DC 20005-3502

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

R. M. Kacich, Director
Nuclear Planning, Licensing & Budgeting
Northeast Utilities Service Company
Post Office Box 128
Waterford, Connecticut 06385

J. M. Solymossy, Director
Nuclear Quality and Assessment Services
Northeast Utilities Service Company
Post Office 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. 180
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 May 6, 1994, supplemented by letter dated August 16, 1994, 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.

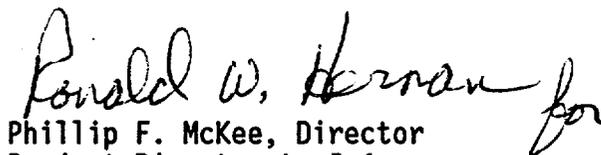
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 180, 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 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Phillip F. McKee, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: October 14, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 180

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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

Remove

3/4 8-8
3/4 8-9
3/4 8-10

Insert

3/4 8-8
3/4 8-9
3/4 8-10

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE with at least one tie breaker between bus trains open:

TRAIN "A" consisting of 125-volt D.C. bus 201A, 125-volt D.C. battery bank 201A and at least 400 ampere charging capacity.

TRAIN "B" consisting of 125-volt D.C. bus 201B, 125-volt D.C. battery bank 201B, and at least 400 ampere charging capacity.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one 125-volt D.C. bus inoperable, restore the inoperable bus to OPERABLE status within 2 hours or be in COLD SHUTDOWN within the next 36 hours.
- b. With a 125-volt D.C. battery and/or its charger inoperable, restore the inoperable battery and/or charger to OPERABLE status within 2 hours or be in COLD SHUTDOWN within the next 36 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized with at least one tie breaker open at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks,

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. The pilot cell specific gravity, corrected to 77°F, is ≥ 1.200 ,
 3. The pilot cell voltage is ≥ 2.08 volts, and
 4. The overall battery voltage is ≥ 125 volts.
- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is ≥ 2.08 volts under float charge, and
 2. The specific gravity, corrected to 77°F, of each cell is ≥ 1.200 .
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or deterioration,
 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material, and
 3. The battery charger will supply at least 400 amperes at a minimum of 130 volts for at least 12 hours.
- d. At least once per 18 months, during shutdown, by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual emergency loads for 8 hours when the battery is subjected to a battery service test.
- e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. This performance discharge test may be performed in lieu of the battery service test.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

- 1 - 125-volt D.C. bus, and
- 1 - 125-volt battery bank and at least 400 ampere charging capacity supplying the above D.C. bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and bus OPERABLE, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 125-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 125-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 180

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 May 6, 1994, as supplemented August 16, 1994, the Northeast Nuclear Energy Company (the licensee) submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 2 Technical Specifications (TS). The requested changes would change TS 3.8.2.3 and 3.8.2.4, "Electrical Power Systems - DC Distribution," and Surveillance Requirements (SR) of TS 4.8.2.3.2.c.2. The August 16, 1994, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

These proposed TS changes were submitted by the licensee to take advantage of their reevaluation of the design of the 125 VDC system at Millstone Unit 2. The NRC electrical distribution system functional inspection (EDSFI) team reviewed the licensee's design and concluded it was adequate.

2.0 BACKGROUND

The 125 VDC system has two battery systems which are separated into trains A and B. Each train has one 125 VDC switchgear assembly, two 125 VDC battery chargers operating in a parallel redundant mode, and four DC distribution panels. A swing charger is available to support either train if required.

The licensee's original plant design determined that a DC charging capacity of 800 amperes was required. The requirement was based on an estimated continuous load of 346 amperes and a required battery charging current of 416 amperes for a total of 762 amperes. The charging current would have recharged the discharged battery in 5.5 hours. This evaluation resulted in a design with two 400 amp chargers per train.

The licensee reevaluated the DC system utilizing actual loads (not nameplate data), and assuming a worst case by cross tying DC buses and supplying them with one battery and one battery charger. The calculations determined that the continuous load for each DC bus was 154 amperes with 246 amperes of charging capacity to recharge a battery. The calculation demonstrated that one charger with a charging capacity of 400 amperes is sufficient to provide the continuous DC loads, and is capable of recharging a fully discharged station battery in 10.37 hours. This recharging time is within the 12-hour recharging time discussed in Section 8.3.2 of the Millstone Unit 2 FSAR. The NRC EDSFI team review of the licensee's calculation of the 125 VDC system at Millstone Unit 2 concluded that the licensee used conservative assumptions in their voltage drop calculation. The team concluded that there were no problems with DC load voltages, even at the minimum battery voltage of 105 VDC. The team concluded that a single charger with a charging capacity of 400 amperes has sufficient capacity to supply the connected bus loads and recharge a fully discharged battery within 12 hours.

3.0 EVALUATION

The staff has evaluated the proposed revisions submitted by the licensee as follows:

Revision to Existing TS Section 3.8.2.3

Modify the LCO for TS 3.8.2.3, TRAIN "A" and TRAIN "B," by replacing the phrase "and a full capacity charger" with the phrase "and at least 400 ampere charging capacity."

Revision to Existing TS Section 3.8.2.4

Modify the LCO for TS 3.8.2.4 by replacing the phrase "and charger" with the phrase "and at least 400 ampere charging capacity."

Revision to Existing Surveillance Requirement (SR) Section 4.8.2.3.2.c.3

Modify SR 4.8.2.3.2.c.3 by replacing the phrase "at least 800 amperes at a minimum of 130 volts for at least 8 hours" with the phrase "at least 400 amperes at a minimum of 130 volts for at least 12 hours."

The licensee's original calculation to size the Class 1E battery chargers resulted in a requirement for two 400 ampere chargers operating in a parallel redundant mode. The new calculations show that a single charger with a charging capacity of 400 amperes is sufficient to provide the connected DC bus loads and is capable of recharging a fully discharged station battery in less than 12 hours as stated in the Millstone Unit 2 FSAR. The staff has evaluated the licensee's proposed TS revisions based on the licensee's reevaluation of the 125 VDC system and the EDSFI team inspection report and finds these changes acceptable.

Based on the above evaluation, the staff has determined that the proposed changes to the Technical Specifications are acceptable.

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 and 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 (59 FR 32232). 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 Contributor: C. Thomas

Date: October 14, 1994