

October 31, 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. M90457)

Dear Mr. Opeka:

The Commission has issued the enclosed Amendment No. 181 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated September 26, 1994.

The amendment revises the Technical Specifications (TS) by adding a footnote to Surveillance Requirement 4.6.1.2.d that defers the performance of Type B and C containment leak rate tests to the end of the twelfth refueling outage.

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 Albert W. De Agazio

for: 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

Enclosures: 1. Amendment No. 181 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, appearing to read "Guy S. Vissing for".

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:

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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. 181
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 26, 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.

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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. 181, 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.

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 31, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 181

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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

Remove

3/4 6-3

Insert

3/4 6-3

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. If any periodic Type A test fails to meet $.75 L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $.75 L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $.75 L_a$ at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 - 1. Confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within $0.25 L_a$,
 - 2. Has a duration sufficient to establish accurately the change in leakage between the Type A and the supplemental test.
 - 3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage rate at P_a (54 psig).
- d. Type B and C tests shall be conducted at P_a (54 psig) at intervals no greater than 24 months except for tests involving air locks.*
- e. The combined bypass leakage rate shall be determined to be $< 0.017 L_a$ by applicable Type B and C tests at least once per 24 months except for penetrations which are not individually testable; penetrations not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized to P_a (54 psig) during each Type A test.
- f. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.

*Except that the performance of the Type B and C tests that were due between June 2 and September 1, 1994, may be deferred to the end of the twelfth refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 181

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 26, 1994, the Northeast Nuclear Energy Company (NNECO or the licensee) submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 2 Technical Specifications (TS). The requested changes would add a footnote to Surveillance Requirement (SR) 4.6.1.2.d that defers the performance of Type B and C containment leak rate tests to the end of the twelfth refueling outage.

2.0 BACKGROUND AND DISCUSSION

On September 24, 1994, NNECO requested the NRC to exercise its discretion not to enforce compliance with the required actions for Millstone Unit 2 Limiting Conditions for Operations (LCOs) 3.6.1.1 and 3.6.1.2 for the remainder of Cycle 12 operations. The enforcement discretion permits NNECO to operate Millstone Unit 2 while the proposed amendment is being processed. Millstone Unit 2 was scheduled to begin its refueling outage on October 1, and to enter Mode 5 on October 3, 1994. On September 23, 1994, NNECO discovered that Type B and C containment leak rate tests for certain containment penetrations had not been performed within the 24 months as required by SR 4.6.1.2.d. The specific Action Statement for LCO 3.6.1.2 applies and requires that containment integrity to be restored within 1 hour or place the plant in hot standby within the next 6 hours, and in cold shutdown within the following 30 hours. Since SR 4.6.1.2.d was inadvertently missed, SR 4.0.3 was invoked at approximately 1:00 p.m. on September 23, 1994. This SR permits the action requirements to be delayed for up to 24 hours to permit the completion of a missed surveillance when the allowable outage time limits of the action requirements are less than 24 hours. Since the Type C test cannot be performed while at power and the Type B tests that have exceeded the 24 month period cannot be completed within the 24-hour window, Millstone Unit 2 would be forced to shutdown to comply with the requirements of the Millstone Unit 2 TS.

The NRC staff granted orally on September 24, 1994, NNECO's request for enforcement discretion associated with Action Statements of LCOs 3.6.1.1 and 3.6.1.2 to be effective until the proposed amendment would be issued. This enforcement discretion was confirmed by the NRC letter to NNECO dated September 30, 1994.

Emergency action is not necessary since by the plant is currently shutdown for the 12th refueling and the action statements of LCOs 3.6.1.1 and 3.6.1.2 do not apply. However, exigent circumstances do exist in order to reduce the time of enforcement discretion which was granted until the license amendment is issued.

3.0 EVALUATION

As justification for the requested amendment, NNECO provided the following rationale:

1. Surveillance Requirement 4.6.1.2.d requires that Type B and C tests be conducted at the peak containment pressure for design basis accidents at intervals no greater than 24 months, except for tests involving air locks. On September 23, 1994, NNECO discovered that Type B and C tests for certain containment penetrations had not been performed within the last 24 months.

Previously, Millstone Unit 2 considered the Type B and Type C tests to constitute one group such that the 2-year surveillance window began shortly after the last component test was completed during the refueling outage. A review of this rationale and discussions with industry counterparts and the NRC staff determined that this was not the appropriate interpretation. Rather, each Type B or C test of a penetration or valve should be considered unique, each with its own 2-year surveillance window. Using this interpretation, NNECO determined on September 23, 1994, that a number of Type B and Type C tests had not been conducted in accordance with the requirements of SR 4.6.1.2.d. Since the Type C tests cannot be performed while at power and the Type B tests that have exceeded the 24-month period cannot be completed within a 24-hour window, Millstone Unit 2 would be forced to shutdown to comply with the Millstone Unit 2 TS.

2. Historical results of previous Type A, B and C tests have demonstrated the leak-tightness of the containment and the reliability of the penetrations/valves.

The first Type A test for the present 10-year period showed that the test passed both the "As-Found" and "As-Left" integrated leakage rate tests (ILRTs). The "As-Found" leakage result was 0.201 weight percent per day and the "As-Left" leakage result was 0.138 weight percent per day. These values represent 53.6% and 36.8% of the Millstone Unit 2 TS limit respectively. The second Type A test for the present 10-year service period showed the "As-Found" and the "As-Left" ILRT results were

0.2809 and 0.2577 weight percent per day respectively. These results represent 74.9% and 68.7% of the Millstone Unit 2 TS limit respectively. In addition at the same time, the total Type B and C "As-Found" and "As-Left" leakage results were 0.049 and 0.008 weight percent per day, respectively. These values represent 16.3% and 2.7% of the Millstone Unit 2 TS limit respectively. The results of these tests demonstrate that Millstone Unit 2 has maintained control of containment integrity by maintaining a conservative margin between the acceptance criterion and the "As-Found" and "As-Left" leakage rates.

During the past two refueling outages, there have been few failures of penetrations/valves to pass their LLRTS. During the 1992 and 1990 Refueling outages, there were a total of five failures (four in 1992 and one in 1990) of penetrations/valves to pass their LLRTS. Of these failures, only one was a repeat failure. This penetration was tested approximately 5 months ago.

During Cycle 12, maintenance has been performed on several penetrations/valves. Their operability was confirmed by the performance of post-maintenance LLRTs which demonstrated that the leakage from the penetrations/valves were within their administrative acceptance criteria.

Additionally, the 48 Type B penetrations (electrical) and 21 Type C penetrations (valves) that are currently outside of the 24-month interval have each passed their last two "As-Found" and "As-Left" tests. These results indicate that the penetrations/valves are reliable.

The previous Type A, B and C tests establish that containment integrity has been maintained, and that the penetrations/valves are reliable. Additionally, the total "As-Found" and "As-Left" leakage results of the last Type B and C tests were only 16.3% and 2.7% of the Millstone Unit 2 TS limit, respectively.

3. If Millstone Unit 2 was required to shutdown prematurely, it would severely impact activities planned to occur during the week before the scheduled shutdown and during the planned shutdown. Such activities were planned to reduce worker exposure during the refueling outage. These include reactor coolant system (RCS) cleanup to reduce RCS activity and degassification of the RCS prior to shutdown to reduce containment activity during shutdown. Also, avoiding an early shutdown of Millstone Unit 2 would allow NNECO to test motor-operated valves and main steamline isolation valves during shutdown that would preclude the additional transients if these valves were tested during startup due to the potential for discovery of valve conditions that would require resolution. In addition, as a result of NNECO shutdown risk analysis to minimize risk, NNECO has developed plans to maximize safe controlled operation during service water system outages and reduced inventory conditions.

The staff notes that the 2-year interval requirement for Type B and C components is intended to be often enough to prevent significant deterioration from occurring and long enough to permit the tests to be performed during the plant outages. Leak rate testing of the penetrations during plant shutdown is preferable because of the lower radiation exposures to plant personnel. Moreover, some penetrations cannot be tested at power. For penetrations that cannot be tested during power operation, or for which testing at power is inadvisable, the increase in confidence in containment integrity following a successful test is not significant enough to justify a plant shutdown specifically to perform the tests within the 2-year period.

Based on the above evaluation, the staff has determined that the proposed TS change is acceptable.

4.0 EXIGENT CIRCUMSTANCES

Surveillance Requirement 4.6.1.2.d requires that Type B and C tests be conducted at the peak containment pressure for design basis accidents at intervals no greater than 24 months, except for the tests involving air locks. On September 23, 1994, NNECO discovered that Type B and C containment leak rate tests for certain containment penetrations had not been performed within the 24 months as required by SR 4.6.1.2.d. The specific Action Statement for LCO 3.6.1.2 applies and requires that containment integrity to be restored within 1 hour or place the plant in hot standby within the next 6 hours, and in cold shutdown within the following 30 hours. Since SR 4.6.1.2.d was inadvertently missed, SR 4.0.3 was invoked at approximately 1:00 p.m. on September 23, 1994. This SR permits the action requirements to be delayed for up to 24 hours to permit the completion of a missed surveillance when the allowable outage time limits of the action requirements are less than 24 hours. Since the Type C test cannot be performed while at power and the Type B tests that have exceeded the 24-month period cannot be completed within the 24 hour window, Millstone Unit 2 would be forced to shutdown to comply with the requirements of the Millstone Unit 2 TS.

The NRC staff granted orally on September 24, 1994, NNECO's request for enforcement discretion associated with Action Statements of LCOs 3.6.1.1 and 3.6.1.2, to be effective until the proposed license amendment would be issued. The discretionary action would be effective until a decision by the staff regarding the proposed amendment could be issued. This enforcement discretion was confirmed by the NRC letter to NNECO dated September 30, 1994.

Shutdown for the 12th refueling began on October 1, 1994, and Mode 5 operation was reached on October 3, 1994. Since emergency conditions no longer exist, exigent action is necessary to reduce the time of enforcement discretion until the license amendment is issued.

The staff concluded that the exercise of enforcement discretion in this instance, involved minimum safety impact and was satisfied that it was warranted from a public health and safety perspective.

The NRC staff does not believe that NNECO has abused the exigency provisions of 10 CFR 50.91(a)(6) in this instance. In accordance with 10 CFR 50.91(a)(6) the Commission has determined that exigent circumstances exist warranting prompt action, the situation could not have been avoided, in that the licensee and the Commission must act quickly to minimize the period of enforcement discretion, and time does not permit the Commission to publish a Federal Register notice allowing 30 days for prior public comment. The Commission has also determined that the amendment, as discussed in Section 6.0, does not involve a significant hazards consideration.

6.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has made a final determination that the amendment involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92(c), this means that the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The Commission has evaluated the proposed changes against the above standards as required by 10 CFR 50.91(a) and has concluded that the changes do not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change to SR 4.6.1.2.d of the Millstone Unit 2 TS will extend the frequency for the Type B and C tests that were due between June 2 and September 1, 1994, to the end of the twelfth refueling outage. Since the plant is currently shutdown for refueling, this change will have no effect on the current operations of Millstone Unit 2. This proposal does not modify the maximum allowable leakage rate at the calculated peak containment pressure, does not impact the design basis of the containment, and does not change the post-accident containment response.

The results of past tests demonstrate that Millstone Unit 2 has maintained control of containment integrity by maintaining a conservative margin between the acceptance criterion and the "As-Found" and "As-Left" leakage rates.

During the past two refueling outages, there have been few failures of penetrations/valves to pass their LLRTs.

During Cycle 12, maintenance has been performed on several penetrations/valves. Their operability has been assured by the performance of post-maintenance LLRTs which demonstrated that the leakage from the penetrations/valves were within their acceptance criteria.

Additionally, the Type B penetrations (electrical) and the Type C penetrations (valves) that are currently outside of the 24-month interval have each passed their last two "As-Found" tests, as a minimum. These results indicate that the penetrations/valves are reliable.

Based on the above, the proposed change to SR 4.6.1.2.d of the Millstone Unit 2 TS does not involve a significant increase in the probability or consequences of an accident previously analyzed.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed change to SR 4.6.1.2.d of the Millstone Unit 2 TS will extend the frequency for the Type B and C tests that were due between June 2 and September 1, 1994, to the end of the twelfth refueling outage. This change merely allows the licensee to schedule the tests before startup during the current refueling outage. This proposal does not make any physical or operational changes to existing plant structures, systems, or components, does not modify the maximum allowable leakage rate at the calculated peak containment pressure, does not impact the design basis of the containment, and does not change the post-accident containment response.

In addition, the proposed changes do not modify the acceptance criteria for the Type A, B, or C tests. Maintaining the leakage through the containment boundary to the atmosphere within a specific value ensures that the plant complies with the requirements of 10 CFR Part 100. The containment boundary serves as an accident mitigator; it is not an accident initiator.

Based on the above, the proposed change to SR 4.6.1.2.d of the Millstone Unit 2 TS does not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in the margin of safety.

The proposed change to SR 4.6.1.2.d of the Millstone Unit 2 TS will extend the frequency for the Type B and C tests that were due between June 2 and September 1, 1994, to the end of the twelfth refueling outage. This proposal does not make any physical or operational changes to existing plant structures, systems, or components, does not modify the containment pressure, does not impact the design basis of the containment, and does not change the post-accident containment response.

Additionally, the past Type A, B, and C tests have demonstrated the leak-tightness of the containment and the reliability of the penetrations/valves.

Based on the above, the proposed change to SR 4.6.1.2.d of the Millstone Unit 2 TS does not involve a significant reduction in the margin of safety.

7.0 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.

8.0 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 (59 FR 52005). The staff has made a final no significant hazards consideration determination with respect to this amendment. 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.

9.0 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: G. Vissing

Date: October 31, 1994