

January 29, 1993

Docket No. 50-423

Distribution:

Mr. John F. Opeka  
Executive Vice President, Nuclear  
Connecticut Yankee Atomic Power Company  
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Dear Mr. Opeka:

SUBJECT: ISSUANCE OF AMENDMENT (TAC No. M84951)

The Commission has issued the enclosed Amendment No. 75 to Facility Operating License No. NPF-49 for Millstone Nuclear Power Station, Unit No. 3, in response to your application dated November 18, 1992.

The amendment changes the Technical Specification surveillance requirements to extend the maximum interval between containment Type B and Type C tests from the present 24 months to 34 months for this fuel cycle only.

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

Vernon L. Rooney, Senior Project Manager  
Project Directorate I-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 75 to NPF-49
- 2. Safety Evaluation

cc w/enclosures:  
See next page

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Northeast Nuclear Energy Company

Millstone Nuclear Power Station  
Unit 3

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

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

DOCKET NO. 50-423

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 75  
License No. NPF-49

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 November 18, 1992, 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. NPF-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 75, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, 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: January 29, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 75

FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

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

Remove

3/4 6-3

Insert

3/4 6-3

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- c. The accuracy of each Type A test shall be verified by a supplemental test which:
  - 1) Confirms the accuracy of the test by verifying that the supplemental test results,  $L_a$ , minus the sum of the Type A and the superimposed leak,  $L_o$ , is equal to or less than  $0.25 L_a$ ;
  - 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test; and
  - 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between  $0.75 L_a$  and  $1.25 L_a$ .
- d. Type B and C tests shall be conducted with gas at  $P_a$ , 53.27 psia (38.57 psig), at intervals no greater than 24 months<sup>(\*)</sup> except for tests involving:
  - 1) Air locks
- e. The combined bypass leakage rate shall be determined to be less than or equal to  $0.042 L_a$  by applicable Type B and C tests at least once per 24 months<sup>(\*)</sup> 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  $P_a$ , 53.27 psia (38.57 psig), during each Type A test;
- f. Air locks shall be tested and demonstrated OPERABLE by the requirements of Specification 4.6.1.3;
- g. Purge supply and exhaust isolation valves shall be demonstrated OPERABLE by the requirements of Specifications 4.6.3.2.c and 4.9.9.
- h. The provisions of Specification 4.0.2 are not applicable.

(\*) The 24-month interval for Type B and Type C tests has been increased to 34 months for Cycle 4 only.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 75

TO FACILITY OPERATING LICENSE NO. NPF-49

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

1.0 INTRODUCTION

The Code of Federal Regulations in 10 CFR Part 50, Appendix J, Sections III.D.2(a) and III.D.3, specifies a periodic testing interval of not greater than 24 months for Type B and Type C containment local leak rate tests (LLRTs). On January 22, 1991, and February 5, 1991, the licensee (Northeast Nuclear Energy Company) commenced the most recent containment LLRTs in accordance with the above Type B and C periodic testing requirements, respectively, for the Millstone Unit No. 3 during the 1991 refueling outage. As a result of an unusually long maintenance outage due to the service water system work and erosion/corrosion work during 1991, and two limited duration outages in 1992, the licensee has rescheduled the next refueling outage from November 1992 to approximately September 1993. Accordingly, by letter dated November 18, 1992, the licensee requested a one-time schedular exemption for the LLRTs from the requirements of 10 CFR Part 50, Appendix J, Sections III.D.2(a) and III.D.3 to accommodate the above schedule change for the next refueling outage. The request for exemption, if granted, would exceed the required Type B and C test interval by approximately 10 months. In another letter, also dated November 18, 1992, the licensee proposed Technical Specification (TS) changes to reflect the above cited exemption request. The requested changes would change the Technical Specification surveillance requirements to extend the maximum interval between containment Type B and Type C tests from the present 24 months to 34 months for this fuel cycle only.

2.0 EVALUATION

At Millstone Unit No. 3, there are 84 Type B penetrations which require Type B testing. Of the 84 penetrations, 80 are electrical penetrations which can be tested at power. The licensee is conducting Type B testing of these penetrations and plans to complete the testing prior to January 22, 1993. Of the four remaining penetrations, two penetrations (the equipment hatch and equipment hatch manway) were tested on November 16, 1991 and January 28, 1992, respectively. The third penetration, the personnel air lock, is covered under TS Section 3.6.1.3 and is not the subject of this request. The fuel transfer canal blind flange which was tested (Type B) on March 18, 1991, is the only penetration that cannot be tested at power and will require an extension.

There are 68 mechanical penetrations that require Type C testing. In January, May and October 1992, while shut down, Type C testing was satisfactorily performed on 31 penetrations. This represents approximately 45 percent of the total Type C testing. The exemption request is only for the remaining penetrations (37) whose last Type C tests were performed during the last refueling outage.

The licensee indicated that the total Type B and C leakage as of October 31, 1992, is 166,161.7 SCCM, which represents approximately 26.6 percent of TS limit of 624,762.67 SCCM ( $0.6 L_a$ ). The total Type B and C bypass leakage is 18,552.0 SCCM, which represents approximately 42.4 percent of TS limit of 43,735 SCCM ( $0.042 L_a$ ). In addition, the past LLRT data (Type B and C) at Millstone Unit No. 3, in general, has demonstrated good leak rate test results. Specifically, during the last refueling outage, the total Type B and C leakage rate was 233,679.2 SCCM. This value is approximately 37.5 percent of the TS limit. The total bypass Type B and C leakage value was approximately 17,810 SCCM, which is approximately 40.7 percent of the TS limit.

The licensee further stated that the last containment integrated leakage rate test (ILRT) completed on July 7, 1989, indicated that the "as-left" ILRT leakage rate (the leakage rate for all potential paths including Type B and C penetrations) was 0.29 weight percent per day which is 44.6 percent of the TS limit of 0.65 weight percent per day ( $L_a$ ), thereby demonstrating that the overall leak tightness of containment and its protective boundaries is maintained. Consequently, the licensee contends that the above test results are sufficient to justify the 2-year test interval to be exceeded by approximately 8 to 10 months and will not result in undue risk to the health or safety of the public. Accordingly, the licensee proposed to change the TS Sections 4.6.1.2.d and 4.6.1.2.e to reflect the above requested exemption.

The staff agrees with the licensee that the above test results are sufficient to justify the 2-year test interval to be exceeded one-time by approximately 8 to 10 months. Furthermore, the 24-month interval requirement for Type B and C testing containment penetrations is intended to be often enough to prevent significant deterioration from occurring and long enough to permit the LLRTs to be performed during plant outages. Leak testing of the penetrations during plant shutdown is preferable because of the lower radiation exposures to plant personnel. Moreover, some penetrations, because of their intended functions, cannot be tested at power operation. For penetrations that cannot be tested during power operation or those that, if tested during plant operation would cause a degradation in the overall safety (e.g., the closing of a redundant line in a safety system), the increase in confidence of containment integrity following a successful test is not significant enough to justify a plant shutdown specifically to perform the LLRTs within a 24-month time period. The licensee committed to perform additional Type C tests during any forced outages of sufficient duration that may occur before the next refueling outage. The remaining Type B test, the fuel transfer canal blind flange, cannot be tested until the next refueling outage. This is because the

pool must be drained to access the flange for testing, and in order to drain the pool certain equipment must be moved over the fuel storage pool. The safety evaluation accompanying License Amendment No. 72 related to charging pump operability stated that "there will be no movement of ...heavy loads over the storage pool during the time the fuel building exhaust filter system is disconnected." The fuel building exhaust filter will be reconnected at the end of cycle 4 during the next refueling outage, at which time the Type B test of the fuel transfer canal blind flange can be performed.

On January 29, 1993, the Commission granted the licensee's November 18, 1992 request for a schedular exemption from the requirements of 10 CFR Part 50, Appendix J, Sections III.D.2(a) and III.D.3.

Based on the testing results and the considerations discussed above, the staff concludes that the licensee's proposed TS changes are acceptable.

### 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 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 (57 FR 61120). 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: D. Shum

Date: January 29, 1993