

January 17, 1989

Docket No. 50-423

Mr. Edward J. Mrocza  
Senior Vice President  
Nuclear Engineering and Operations  
Northeast Nuclear Energy Company  
Post Office Box 270  
Hartford, Connecticut 06141-0270

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 69273)

The Commission has issued the enclosed Amendment No.30 to Facility Operating License No. NPF-49 for Millstone Nuclear Power Station, Unit No. 3, in response to your application dated August 11, 1988.

The amendment changes Technical Specification (TS) 4.6.1.2, "Containment Leakage," to allow the use of the "mass point" methodology, per ANSI/ANS 56.8-1981, in addition, or as an alternative to, the presently approved "total time" methodology.

A copy of our Safety Evaluation is also enclosed. The Notice of issuance will be included in the Commission's bi-weekly Federal Register notice.

Your August 11, 1988 application also requested an exemption from certain requirements of Appendix J to 10 CFR Part 50 to allow use of the "mass point" methodology. The proposed exemption is no longer needed in that the NRC issued a final rule on November 15, 1988 which amended Appendix J to allow use of the "mass point" methodology.

Sincerely,

/s/

8901250175 890117  
PDR ADOCK 05000423  
P PNU

David H. Jaffe, Project Manager  
Project Directorate I-4  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 30 to NPF-49
- 2. Safety Evaluation

cc w/enclosures:  
See next page

[5520 Document Name: Amend Tac 69273]

*No legal objection, but  
See attached note. QFO/1/1*

OFC	:LA:PDI-4	:PM:PDI-4	:PD:PDI-4	:SPLB	:OGC
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*1/6/89*

*CPI*

Mr. E. J. Mroccka  
Northeast Nuclear Energy Company

Millstone Nuclear Power Station  
Unit No. 3

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AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. NPF-49

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cc: Licensee/Applicant Service List



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. 30  
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 August 11, 1988, 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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\*Northeast Nuclear Energy Company is authorized to act as agent and representative for the following Owners: Central Maine Power Company, Central Vermont Public Service Corporation, Chicopee Municipal Lighting Plant, City of Burlington, Vermont, Connecticut Municipal Electric Light Company, Massachusetts Municipal Wholesale Electric Company, Montaup Electric Company, New England Power Company, The Village of Lyndonville Electric Department, Western Massachusetts Electric Company, and Vermont Electric Generation and Transmission Cooperative, Inc., and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

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PDR ADOCK 05000423  
P PNU

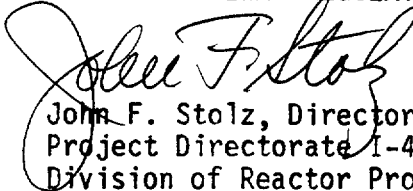
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 30, 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 17, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 30

FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

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. The corresponding overleaf pages are provided to maintain document completeness.

Remove

3/4 6-2

Insert

3/4 6-2

### 3/4.6 CONTAINMENT SYSTEMS

#### 3/4.6.1 PRIMARY CONTAINMENT

##### CONTAINMENT INTEGRITY

##### LIMITING CONDITION FOR OPERATION

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3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

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4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that all penetrations\* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-2 of Specification 3.6.3;
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3; and
- c. After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at a pressure not less than  $P_a$ , 54.1 psia (39.4 psig), and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than  $0.60 L_a$ .

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\*Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

## CONTAINMENT SYSTEMS

### CONTAINMENT LEAKAGE

#### LIMITING CONDITION FOR OPERATION

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3.6.1.2 Containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of less than or equal to  $L_a$ , 0.9% by weight of the containment air per 24 hours at  $P_a$ , 54.1 psia (39.4 psig);
- b. A combined leakage rate of less than 0.60  $L_a$  for all penetrations and valves subject to Type B and C tests, when pressurized to  $P_a$ ; and
- c. A combined leakage rate of less than or equal to 0.01  $L_a$  for all penetrations identified in Table 3.6-1 as Enclosure Building bypass leakage paths when pressurized to  $P_a$ .

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTION:

With the measured overall integrated containment leakage rate exceeding 0.75  $L_a$ , or the measured combined leakage rate for all penetrations and valves subject to Type B and C tests exceeding 0.60  $L_a$ , or the combined bypass leakage rate exceeding 0.01  $L_a$ , restore the overall integrated leakage rate to less than 0.75  $L_a$ , the combined leakage rate for all penetrations subject to Type B and C tests to less than 0.60  $L_a$ , and the combined bypass leakage rate to less than 0.01  $L_a$  prior to increasing the Reactor Coolant System temperature above 200°F.

#### SURVEILLANCE REQUIREMENTS

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4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50 using methods and provisions of ANSI N45.4-1972 (Total Time Method) and/or ANSI/ANS 56.8-1981 (Mass Point Method):

- a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at  $40 \pm 10$  month intervals during shutdown at a pressure not less than  $P_a$ , 54.1 psia (39.4 psig) during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection;
- b. If any periodic Type A test fails to meet 0.75  $L_a$ , 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 0.75  $L_a$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet 0.75  $L_a$  at which time the above test schedule may be resumed;





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 30

TO FACILITY OPERATING LICENSE NO. NPF-49

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

INTRODUCTION

By application for license amendment dated August 11, 1988, Northeast Nuclear Energy Company (the licensee) requested changes to Millstone Unit 3 Technical Specification (TS) 4.6.1.2, "Containment Leakage" to allow the use of the "mass point" methodology, per ANSI/ANS 56.8-1981, in addition, or as an alternative to, the presently approved "total time" methodology.

DISCUSSION AND EVALUATION

It has been recognized by the professional community that the mass point method is an acceptable means for calculation of containment leakage in addition to the two other methods, point-to-point and total time, which are referenced in ANSI N45.4-1972. The mass point method calculates the air mass at each point in time, and plots it against time. A linear regression line is plotted through the mass-time points using a least square fit. The slope of this line is proportional to the leakage rate. The mass point method has some advantages when it is compared with the other methods. In the total time method, a series of leakage rates is calculated on the basis of air mass differences between an initial data point and each individual data point thereafter. If for any reason (such as instrument error, lack of temperature equilibrium, ingassing, or outgassing) the initial data point is not accurate, the results of the test will be affected. In the point-to-point method, the leak rates are based on the mass difference between each pair of consecutive points which are then averaged to yield a single leakage rate estimate. Mathematically, this can be shown to be the difference between the air mass at the beginning of the test and the air mass at the end of the test expressed as a percentage of the containment air mass.

It follows from the above that the point-to-point method does not make use of any mass readings taken during the test and thus the leakage rate is calculated on the basis of the difference in mass between two measurements taken at the beginning and at the end of the test, which are 24 hours apart.

ANSI/ANS 56.8-1981, which was intended to replace ANSI N45.4-1972, specifies the use of the mass point method, to the exclusion of the two older methods. However, the staff has determined that these three methods (mass point, total time and point-to-point) are acceptable methods which may be used to calculate containment leakage rates. NRC regulations were recently amended, 53 FR 458901, November 15, 1989 to permit use of the mass point method. The proposed amendment complies with the revised regulation.

Based upon the above, we conclude that the use of the "mass point" methodology, during a 24-hour containment leak rate test is acceptable as is the proposed change to TS 4.6.1.2.

#### ENVIRONMENTAL CONSIDERATION

This amendment changes surveillance requirements. The 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 published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. 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.

#### CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: January 17, 1989

Principal Contributor: D. Jaffe