

September 1, 1987

Docket No. 50-336

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

Dear Mr. Mrocza:

SUBJECT: ISSUANCE OF AMENDMENT

The Commission has issued the enclosed Amendment No.118 to Facility Operating License No. DPR-65 for Millstone Nuclear Power Station, Unit No. 2, in partial response to your application dated June 25, 1987.

The change modifies the Technical Specifications (TS) as follows: (1) the TS Table that explicitly lists the snubbers that are required to be operable and undergo surveillance is eliminated and (2) the TS numbering system for TS 3/4.7.8.1 is changed. The third proposed change to the snubber TS, which would allow the licensee to perform an engineering evaluation to determine a snubber supported system/component to be operable with an inoperable snubber, will be addressed in future correspondence.

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

Sincerely,

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

Enclosures:

1. Amendment No. 118 to DPR-65
2. Safety Evaluation

cc w/enclosures:  
See next page

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Mr. Edward J. Mroczka  
Northeast Nuclear Energy Company

Millstone Nuclear Power Station  
Unit No. 2

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

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.118  
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 June 25, 1987, 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. 118, 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



John F. Stolz, Director  
Project Directorate I-4  
Division of Reactor Projects I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 1, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 118

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

Remove

3/4 7-21  
thru  
3/4 7-30  
B 3/4 7-5  
B 3/4 7-6  
B 3/4 7-7

Insert

3/4 7-21  
thru  
3/4 7-30  
B 3/4 7-5  
B 3/4 7-6  
B 3/4 7-7

## PLANT SYSTEMS

### 3/4.7.8 SNUBBERS

#### LIMITING CONDITION FOR OPERATION

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3.7.8 All snubbers shall be OPERABLE. The only snubbers excluded from the requirements are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system.

APPLICABILITY: MODES 1, 2, 3, and 4. MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES.

#### ACTION:

With one or more snubbers inoperable within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.8.c on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for the system.

#### SURVEILLANCE REQUIREMENTS

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4.7.8 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Visual Inspection

Visual inspections shall be performed in accordance with the inspection schedule listed in Table 4.7-3.

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify: (1) that there are no visible indications of damage or impaired OPERABILITY and (2) attachments to the foundation or supporting structure are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that:

1. The cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type that may be generically susceptible; and
2. The affected snubber is functionally tested in the as found condition and determined OPERABLE per Specifications 4.7.8.d or 4.7.8.e, as applicable.

All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

c. Snubber Tests

At least once per eighteen (18) months during shutdown, a representative sample (10% of the total of each type of snubber, mechanical and hydraulic, except steam generator hydraulic snubbers in use in the plant) shall be tested either in place or in a bench test. For each snubber that does not meet the test acceptance criteria of Specification 4.7.8.d or 4.7.8.e, as applicable, an additional 10% of that type of snubber shall be tested.

Testing shall continue until no additional inoperable snubbers are found within a sample or until all snubbers have been tested. The representative sample selected for testing shall include the various configurations, and the range of size and capacity of snubbers.

Snubbers identified as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative sample.\*

In addition to the regular sample, in locations where snubbers had failed the previous test due to operational or environmental conditions (excessive vibration, water hammer, high radiation, extreme heat or humidity, etc.), the snubbers currently installed in these locations shall be tested during the next test period. Test results of these snubbers may not be included for the resampling. All replacement snubbers shall have been tested prior to installation.

All steam generator hydraulic snubbers shall be tested and refurbished every seven years or less in accordance with the preventative maintenance program, in lieu of the functional test requirements of this specification.

If any snubber selected for testing either fails to lock-up or fails to move (i.e., frozen in place), the cause will be evaluated and if caused by manufacturer design deficiency, all snubbers of the same design subject to the same defect shall be tested regardless of location or difficulty of removal. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the test acceptance criteria.

For the snubber(s) found inoperable, an engineering evaluation shall be performed on the components which are supported by the snubber(s). The purpose of this engineering evaluation shall be to

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\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if a justifiable basis for exemption is presented.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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determine if the components supported by the snubber(s) were adversely affected by the inoperability of the snubber(s) in order to ensure that the supported component remains capable of meeting the designed service.

d. Hydraulic Snubbers Functional Test Acceptance Criteria

The hydraulic snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed, or release rate, where required, is within the specified range in compression or tension.

e. Mechanical Snubbers Functional Test Acceptance Criteria\*

The mechanical snubber functional test shall verify that:

1. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force.
2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.

f. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.h.

Concurrent with the first inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

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\*Mechanical snubber functional test acceptance criteria shall become effective upon installation of snubber testing equipment but not later than June 30, 1985.

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## PLANT SYSTEMS

### BASES

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#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on sealed source removable contamination ensure that the total body or individual organ irradiation does not exceed allowable limits in the event of ingestion or inhalation of the source material. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. Leakage of sources excluded from the requirements of this specification represent less than one maximum permissible body burden for total body irradiation if the source material is inhaled or ingested.

#### 3/4.7.8 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Plant Operations Review Committee. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.), and the recommendations of Regulatory Guide 8.8 and 8.10. The addition or deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule.

## PLANT SYSTEMS

### BASES

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When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to rejection of the snubber by visual inspection, or are similarly located or exposed to the same environmental conditions such as temperature, radiation, and vibration. Due to the size and location of the steam generator hydraulic snubbers, regular removal and testing as specified for hydraulic and mechanical snubbers would represent a significant undertaking during each refueling outage. As such, these snubbers have been treated separately and are tested and refurbished as a group in accordance with the manufacturer's recommended preventative maintenance program.

When a snubber is found inoperable, an engineering evaluation is performed, in addition to the determination of the snubber mode of failure, in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber.

The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

To provide assurance of snubber reliability, a representative sample of the installed snubbers will be tested during plant shutdowns at eighteen (18) month intervals. Observed failures of these sample snubbers shall require testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc....). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

### 3/4.7.9 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression system ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire

## PLANT SYSTEMS

### BASES

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suppression system consists of the water system, spray and/or sprinklers and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

#### 3.4.7.10 PENETRATION FIRE BARRIERS

The functional integrity of the fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when a barrier is not functional, alternate measures are taken to prevent the possible spread of fire. These measures include verifying the operability of fire detection or suppression systems on both sides of the affected barrier and establishing a fire watch patrol, or posting a continuous fire watch in the vicinity of the affected barrier, or installation of a temporary fire stop pending restoration of the permanent seal.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 118 TO DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

INTRODUCTION

By application for license amendment dated June 25, 1987, Northeast Nuclear Energy Company, et al. (the licensee), requested changes to the Technical Specifications (TS) for Millstone Unit 2 regarding hydraulic seismic restraints (snubbers), TS 3/4.7.8.1, as follows: (1) the TS Table that explicitly lists the snubbers that are required to be operable and undergo surveillance would be eliminated and (2) the TS numbering system for TS 3/4.7.8.1 would be changed. The third proposed change to the snubber TS, which would allow the licensee to perform an engineering evaluation to determine a snubber supported system/component to be operable with an inoperable snubber, will be addressed in future correspondence.

DISCUSSION AND EVALUATION

On May 3, 1984, the NRC issued Generic Letter (GL) 84-13, "Technical Specifications for Snubbers." The contents of GL 84-13 state, in part:

During the last several years, a large number of license amendments have been required to add, delete or modify the snubber listing within the technical specifications. We have reassessed the inclusion of snubber listings within the technical specifications and conclude that such listings are not necessary provided the snubber technical specification is modified to specify which snubbers are required to be operable. You should also note that the recordkeeping requirements of paragraph 4.9.7.f of the snubber technical specification are not altered by this revision. Paragraph 4.9.7.f requires that the plant records contain a record of the service life, installation date, etc. of each snubber. Since any changes in snubber quantities, types, or locations would be a change to the facility, such changes would be subject to the provisions of 10 CFR Part 50.59 and, of course, these changes would have to be reflected in the records required by paragraph 4.7.9.f.

The licensee's June 25, 1987 application for license amendment is responsive to GL 84-13 in that it proposes the deletion of the TS snubber listing. As recommended by GL 84-13, a revised Limiting Condition for Operation, (LCO) and associated Action Statement, replaces the snubber list. The proposed LCO and Action Statement define which snubbers must be operable (and undergo surveillance) and also provides appropriate remedial actions.

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The proposed change to TS 3/4.7.8.1 does not decrease the seismic capability of snubber-supported systems in that no change in the number or placement of snubbers will occur as a direct result of the proposed change. The proposed change to TS 3/4.7.8.1 would allow the licensee to add or delete snubbers, previously permitted under TS 3/4.7.8.1 without prior NRC approval, without a subsequent license amendment to keep the "snubber list" current. The licensee would still be required to prepare an evaluation, pursuant to 10 CFR 50.59(b)(1), prior to removal of a snubber associated with TS 3/4.7.8.1. Based upon the above, proposed TS 3/4.7.8 (previously TS 3/4.7.8.1 and renumbered as TS 3/4.7.8 for convenience) is acceptable.

#### ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change in 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 the individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this 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 this amendment will not be inimical to the common defense and security or to the health safety of the public.

Dated: September 1, 1987

Principal Contributor:  
D. Jaffe