

June 18, 1990

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Docket No. 50-423

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

Dear Mr. Mroczka:

SUBJECT: MILLSTONE NUCLEAR POWER STATION UNIT 3 - ISSUANCE OF AMENDMENT  
(TAC NO. 75516)

The Commission has issued the enclosed Amendment No. 51 to Facility Operating License No. NPF-49 for Millstone Nuclear Power Station, Unit No. 3, in response to your application dated December 11, 1989 as supplemented by letter dated March 2, 1990.

The amendment modifies Technical Specification (TS) 3/4.5.1, "Accumulators," to increase the allowable out-of-service time (for reasons other than a closed discharge isolation valve) from 1 hour to 8 hours.

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

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

Enclosures:

1. Amendment No. 51 to NPF-49
2. Safety Evaluation

cc w/enclosures:  
See next page

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NAME	:SNORPTS	:DJaffe:lm	:JStolz		:JCalvo
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DATED: June 18, 1990  
AMENDMENT NO. 51 TO FACILITY OPERATING LICENSE NO. NPF-49

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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. 51  
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 December 11, 1989 as supplemented by letter dated March 2, 1990 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. NPF-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 51, 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: June 18, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 51

FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

Replace page 3/4 5-1 of the Appendix A Technical Specifications with the enclosed page. The revised page is identified by amendment number and contains a vertical line indicating the area of change. The corresponding overleaf page is provided to maintain document completeness.

*This attachment to 50423P  
( 9006250293) 6/18/90 was  
inadvertently left out  
of the package as an  
attachment to Appendix A.*

### 3/4.5 EMERGENCY CORE COOLING SYSTEMS

#### 3/4.5.1 ACCUMULATORS

##### LIMITING CONDITION FOR OPERATION

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3.5.1 Each Reactor Coolant System (RCS) accumulator shall be OPERABLE with:

- a. The isolation valve open and power removed,
- b. A contained borated water volume of between 6618 and 6847 gallons,
- c. A boron concentration of between 2200 and 2600 ppm, and
- d. A nitrogen cover-pressure of between 636 and 694 psia.

APPLICABILITY: MODES 1, 2, and 3\*.

##### ACTION:

- a. With one accumulator inoperable, except as a result of a closed isolation valve, restore the inoperable accumulator to OPERABLE status within 8 hours or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.
- b. With one accumulator inoperable due to the isolation valve being closed, either immediately open the isolation valve or be in at least HOT STANDBY within 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

##### SURVEILLANCE REQUIREMENTS

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4.5.1.1 Each accumulator shall be demonstrated OPERABLE:

- a. At least once per 12 hours by:
  - 1) Verifying the contained borated water volume and nitrogen cover-pressure in the tanks to be within the above limits, and
  - 2) Verifying that each accumulator isolation valve is open.
- b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the accumulator solution; and

\*Pressurizer pressure above 1000 psig.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20545

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 51

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 December 11, 1989, as supplemented by letter dated March 2, 1989, Northeast Nuclear Energy Company, et. al (the licensee), requested changes to Millstone Unit 3 Technical Specifications (TS). The proposed amendment would modify Technical Specification (TS) 3/4.5.1, "Accumulators," to increase the allowable out-of-service time (for reasons other than a closed discharge isolation valve) from 1 hour to 8 hours.

DISCUSSION AND EVALUATION

The Millstone Unit 3 coolant system is equipped with four large tanks pressurized with nitrogen and containing borated water. In the event of a loss-of-coolant accident (LOCA) that causes a significant decrease in reactor coolant system pressure, these "accumulator" tanks discharge their borated water into the reactor coolant system. The accumulator's function is to temporarily reflood the reactor coolant system and thus supply coolant until the Emergency Core Cooling System can begin operation.

At the present time, TS 3.5.1 requires that, during Modes 1, 2 and 3, each accumulator be operable with the following conditions being met:

- a. The isolation valve open and power removed,
- b. A contained borated water volume of between 6618 and 6847 gallons,
- c. A boron concentration of between 2200 and 2600 ppm, and
- d. A nitrogen cover-pressure of between 636 and 694 psia.

If one accumulator is inoperable for reasons other than a closed isolation valve, TS 3.5.1 would require restoration of the inoperable accumulator to operable status within 1 hour or place the plant in Hot Standby within 6 hours. The licensee has requested that the 1 hour restoration time be extended to 8 hours.

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The NRC staff has reviewed a requested change to the TS for Seabrook Unit 1 Docket NO. 50-443 that is identical to the request considered herein. Seabrook Unit 1 utilizes a Westinghouse 4 loop PWR that is similar to Millstone Unit 3 in many respects. In the case of Seabrook Unit 1, the change to TS to increase allowable out of service time for the accumulators (except as a result of a closed isolation valve) from one hour to eight hours was found to be safe and acceptable as the contribution to risk from this change was determined to be small and the necessity that all four accumulators be operable is conservative. The NRC staff considerations associated with the Seabrook Unit 1 TS change are documented in a May 20, 1986 letter from Thomas M. Novak, NRC, to Robert J. Harrison, Public Service Company of New Hampshire.

In addition, using an NRC staff-approved probabilistic risk assessment (PRA) model, the Millstone Unit 3 licensee found that the probability of a medium-to-large break LOCA concurrent with an inoperable accumulator increased from  $3.75\text{E}-8/\text{yr}$  to  $3.00\text{E}-7/\text{yr}$ . The increase in core melt frequency, however, only increases by  $2.63\text{E}-7/\text{yr}$ . This increase is negligible (e.g. less than .5%) when compared to the overall core melt frequency due to internally initiated events of  $6.34\text{E}-5/\text{yr}$ .

We have reviewed the licensee's calculations concerning inoperability of an accumulator and we concur that the associated increase in core melt frequency is negligible and acceptable. Accordingly, the proposed change to the TS is acceptable.

#### 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. We have 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 staff 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 (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.

Dated: June 18, 1990

Principal Contributor: David H. Jaffe