

February 18, 1993

Docket No. 50-423

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

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M84265)

The Commission has issued the enclosed Amendment No. 76 to Facility Operating License No. NPF-49 for Millstone Nuclear Power Station, Unit No. 3, in response to your application dated July 27, 1992.

The amendment revises the technical specifications related to reactor vessel water level instrumentation by incorporating changes which have been generically accepted by the NRC.

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. 76 to NPF-49
2. Safety Evaluation

cc w/enclosures:

See next page

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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. 76  
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 July 27, 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.

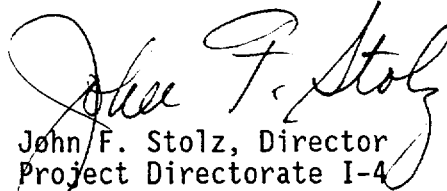
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 76 , 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: February 18, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 76

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.

<u>Remove</u>	<u>Insert</u>
3/4 3-59	3/4 3-59
3/4 3-59a	3/4 3-59a
3/4 3-61	3/4 3-61
3/4 3-63	3/4 3-63
B3/4 3-5	B3/4 3-5

## INSTRUMENTATION

### ACCIDENT MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With the number of OPERABLE accident monitoring instrumentation channels except the containment area high range radiation monitor, the containment hydrogen monitor, and reactor vessel water level, less than the Total Number of Channels shown in Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.
- b. With the number of OPERABLE accident monitoring instrumentation channels except the containment area-high range radiation monitor, the containment hydrogen monitor, and reactor vessel water level less than the Minimum Channels OPERABLE requirements of Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.
- c. With the number of OPERABLE channels for the containment area-high range radiation monitor less than required by either the total or the Minimum Channels OPERABLE requirements, initiate an alternate method of monitoring the appropriate parameter(s), within 72 hours, and either restore the inoperable channel(s) to OPERABLE status within 7 days or prepare and submit a Special Report to the Commission, pursuant to Specification 6.9.2, within 14 days that provides actions taken, cause of the inoperability, and the plans and schedule for restoring the channels to OPERABLE status.
- d. With the number of OPERABLE channels for the containment hydrogen monitors less than the total number of channels shown in Table 3.3-10, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours. With the number of operable channels for the containment hydrogen monitors less than the minimum channels OPERABLE requirement of Table 3.3-10, restore the inoperable channel(s) to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.
- e. With the number of OPERABLE channels for the reactor vessel water level monitor less than the Total number of Channels shown in Table 3.3-10, either restore the inoperable channel to OPERABLE status within 7 days if repairs are feasible without shutting down or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the

## LIMITING CONDITION FOR OPERATION (Continued)

action taken, the cause of the inoperability, and the plans and schedule for restoring the channel to OPERABLE status.

- f. With the number of OPERABLE channels for the reactor vessel water level monitor less than the minimum channels OPERABLE requirements of Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 48 hours if repairs are feasible without shutting down or:
1. Initiate an alternate method of monitoring the reactor vessel inventory;
  2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the channel(s) to OPERABLE status; and
  3. Restore the channel(s) to OPERABLE status at the next scheduled refueling.
- g. Entry into an OPERATIONAL MODE is permitted while subject to these ACTION requirements.

## SURVEILLANCE REQUIREMENTS

4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION at the frequencies shown in Table 4.3-7.

TABLE 3.3-10 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
16. Containment Area - High Range Radiation Monitor	2	1
17. Reactor Vessel Water Level	2*	1*
18. Containment Hydrogen Monitor	2	1
19. Neutron Flux	2	1

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\*A channel consists of eight sensors in a probe. A channel is operable if four or more sensors, half or more in the upper head region and half or more in the upper plenum region, are operable.



TABLE 4.3-7 (Continued)

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
16. Containment Area - High Range Radiation Monitor	M	R*
17. Reactor Vessel Water Level	M	R**
18. Containment Hydrogen Monitor	M	R
19. Neutron Flux	M	R

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\*CHANNEL CALIBRATION may consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/h and a one point calibration check of the detector below 10 R/h with an installed or portable gamma source.

\*\*Electronic calibration from the ICC cabinets only.

## INSTRUMENTATION

### BASES

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#### REMOTE SHUTDOWN INSTRUMENTATION (Continued)

instrumentation, control, and power circuits and transfer switches necessary to eliminate effects of the fire and allow operation of instrumentation, control and power circuits required to achieve and maintain a safe shutdown condition are independent of areas where a fire could damage systems normally used to shut down the reactor. This capability is consistent with General Design Criterion 3 and Appendix R to 10 CFR Part 50.

#### 3/4.3.3.6 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. The instrumentation included in this specification are those instruments provided to monitor key variables, designated as Category 1 instruments following the guidance for classification contained in Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident."

In the event more than four sensors in a Reactor Vessel Level channel are inoperable, repairs may only be possible during the next refueling outage. This is because the sensors are accessible only after the missile shield and reactor vessel head are removed. It is not feasible to repair a channel except during a refueling outage when the missile shield and reactor vessel head are removed to refuel the core. If only one channel is inoperable, it should be restored to OPERABLE status in a refueling outage as soon as reasonably possible. If both channels are inoperable, at least one channel shall be restored to OPERABLE status in the nearest refueling outage.

#### 3/4.3.3.7 FIRE DETECTION INSTRUMENTATION

The OPERABILITY of the fire detection instrumentation ensures that both adequate warning capability is available for prompt detection of fires and that Fire Suppression Systems, that are actuated by fire detectors, will discharge extinguishing agents in a timely manner. Prompt detection and suppression of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility Fire Protection Program.

Fire detectors that are used to actuate Fire Suppression Systems represent a more critically important component of a plant's Fire Protection Program than detectors that are installed solely for early fire warning and notification. Consequently, the minimum number of OPERABLE fire detectors must be greater.

The loss of detection capability for Fire Suppression Systems, actuated by fire detectors, represents a significant degradation of fire protection for any area. As a result, the establishment of a fire watch patrol must be initiated at an earlier stage than would be warranted for the loss of detectors that provide only early fire warning. The establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 76

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

By letter dated July 27, 1992, the Northeast Nuclear Energy Company (NNECO/the licensee) requested changes to the Technical Specifications (TS) for Millstone, Unit 3. The proposed changes will revise the TS related to reactor vessel water level instrumentation by incorporating the generic requirements for the reactor vessel level monitoring system (RVLMS).

The subcooled margin monitor, core exit thermocouple and the reactor vessel coolant inventory tracking system are required by NUREG-0737 Item II.F.2 of the Post TMI-2 Action Plan for inadequate core cooling monitoring. At Millstone 3, the heated junction thermocouple (HJTC) system designed by Combustion Engineering (CE) is used to monitor the coolant inventory in the reactor vessel region above the core. The HJTC system consists of a two-channel system, each consisting of a string of eight sensors, which provide indication of conditions at eight distinct levels.

2.0 EVALUATION

The licensee has proposed to make the following changes to the TS:

- a. Section 3.3.3.6 has been revised to add separate action statement, "e and f," when either one or two channels of RVLMS are not operable. Action Statement a and b are revised to exclude RVLMS from these action statements.
- b. Table 3.3-10 has been revised to include the definition of an operable channel.
- c. Table 4.3-7 has been revised to clarify that electronic calibration is performed from the inadequate core cooling cabinets only.
- d. Section 3/4.3.3.6 has been revised to provide the bases for these changes.

The proposed changes provide flexibility to utilize other means of monitoring RVLMS if the inoperable channel(s) cannot be restored in specified time limit and thus prevent an unnecessary shutdown. NNECO previously had proposed similar changes for Millstone 2 which were accepted by the staff in a letter dated April 21, 1989. Also, the proposed changes are similar to the changes which were proposed by the CE Owners Group for the CE designed RVLMS using a HJTC concept. By letter dated October 28, 1986, NRC had accepted the proposed changes to the TS for the CE plants. The proposed changes were also acceptable for other reactor designs provided the channel operability of the HJTC probe is defined as follows:

"A channel is operable if four or more sensors, half or more in the upper head region, and half or more in the upper plenum region, are operable."

NNECO has provided the definition of channel operability in Table 3.3-10 of the TS which meets the requirement stated above. Based on this, the staff finds the proposed changes to the TS acceptable.

Based on the staff's evaluation of the licensee's submittal, the staff has concluded that the proposed changes to the TS are acceptable. The proposed changes have been accepted by the staff previously on a generic basis and will reduce the unnecessary plant shutdown without any negative impact.

### 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 a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 40217). 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.

## 6.0 REFERENCES

1. Letter dated February 19, 1985 from R.W. Wells, Chairman, CE Owners Group, to the USNRC "Technical Specification for the Reactor Vessel Level Monitoring System."
2. Letter dated October 28, 1986, from D.M. Crutchfield, USNRC to R.W. Wells, Chairman, CE Owners Group, "Safety Evaluation of Generic TS Proposed by CE Owners Group for the RVLMS."
3. Letter dated April 21, 1989, from G.S. Vissing, USNRC to E. J. Mroczka, NNECO, "Issuance of Amendment (TAC No. 71854)."

Principal Contributor: Hukam Garg

Date: February 18, 1993