

July 11, 1995

Mr. John F. Opeka
Executive Vice President, Nuclear
Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, CT 06141-0270

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M91371)

Dear Mr. Opeka:

The Commission has issued the enclosed Amendment No. ¹¹⁶ to Facility Operating License No. NPF-49 for the Millstone Nuclear Power Station, Unit No. 3, in response to your application dated January 10, 1995.

The amendment revises the Technical Specifications to delete the power range negative flux trip from Tables 2.2-1, 3.3-1, and 4.3-1, and delete the associated Bases Section 2.0.

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-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosures: 1. Amendment No. ¹¹⁶ to NPF-49
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
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Dear Mr. Opeka:

The Commission has issued the enclosed Amendment No. 116 to Facility Operating License No. NPF-49 for the Millstone Nuclear Power Station, Unit No. 3, in response to your application dated January 10, 1995.

The amendment revises the Technical Specifications to delete the power range negative flux trip from Tables 2.2-1, 3.3-1, and 4.3-1, and delete the associated Bases Section 2.0.

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,

A handwritten signature in dark ink, appearing to read "V. Rooney", is written over a horizontal line.

Vernon L. Rooney, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosures: 1. Amendment No. 116 to NPF-49
 2. Safety Evaluation

cc w/encs: See next page

Mr. John F. Opeka
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Millstone Nuclear Power Station
Unit 3

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

DOCKET NO. 50-423

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 116
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 January 10, 1995, 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. 116 , 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



Phillip F. McKee, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: July 11, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 116

FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove

2-5
B 2-4
3/4 3-2
3/4 3-10

Insert

2-5
B 2-4
3/4 3-2
3/4 3-10

TABLE 2.2-1

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
1. Manual Reactor Trip	N.A.	N.A.	N.A.	N.A.	N.A.
2. Power Range, Neutron Flux					
a. High Setpoint					
1) Four Loops Operating	7.5	4.56	0	$\leq 109\%$ of RTP**	$\leq 111.1\%$ of RTP**
2) Three Loops Operating	7.5	4.56	0	$\leq 80\%$ of RTP**	$\leq 82.1\%$ of RTP**
b. Low Setpoint	8.3	4.56	0	$\leq 25\%$ of RTP**	$\leq 27.1\%$ of RTP**
3. Power Range, Neutron Flux, High Positive Rate	1.6	0.5	0	$\leq 5\%$ of RTP** with a time constant ≥ 2 seconds	$\leq 6.3\%$ of RTP** with a time constant ≥ 2 seconds
4. Deleted					
5. Intermediate Range, Neutron Flux	17.0	8.41	0	$\leq 25\%$ of RTP**	$\leq 30.9\%$ of RTP**
6. Source Range, Neutron Flux	17.0	10.01	0	$\leq 10^{+6}$ cps	$\leq 1.4 \times 10^{+6}$ cps
7. Overtemperature ΔT					
a. Four Loops Operating					
1) Channels I, II	10.0	8.14	1.61 + 1.33 (Temp + Press)	See Note 1	See Note 2
2) Channels III, IV	10.0	7.17	1.61 + 2.60 (Temp + Press)	See Note 1	See Note 2

**RTP = RATED THERMAL POWER

LIMITING SAFETY SYSTEM SETTINGS

BASES

REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS (Continued)

The various Reactor trip circuits automatically open the Reactor trip breakers whenever a condition monitored by the Reactor Trip System reaches a preset or calculated level. In addition to redundant channels and trains, the design approach provides a Reactor Trip System which monitors numerous system variables, therefore providing Trip System functional diversity. The functional capability at the specified trip setting is required for those anticipatory or diverse Reactor trips for which no direct credit was assumed in the safety analysis to enhance the overall reliability of the Reactor Trip System. The Reactor Trip System initiates a Turbine trip signal whenever Reactor trip is initiated. This prevents the reactivity insertion that would otherwise result from excessive Reactor Coolant System cooldown and thus avoids unnecessary actuation of the Engineered Safety Features Actuation System.

Manual Reactor Trip

The Reactor Trip System includes manual Reactor trip capability.

Power Range, Neutron Flux

In each of the Power Range Neutron Flux channels there are two independent bistables, each with its own trip setting used for a High and Low Range trip setting. The Low Setpoint trip provides protection during subcritical and low power operations to mitigate the consequences of a power excursion beginning from low power, and the High Setpoint trip provides protection during power operations to mitigate the consequences of a reactivity excursion from all power levels. The High Setpoint trip is reduced during three loop operation to a value consistent with the safety analysis.

The Low Setpoint trip may be manually blocked above P-10 (a power level of approximately 10% of RATED THERMAL POWER) and is automatically reinstated below the P-10 Setpoint.

Power Range, Neutron Flux, High Positive Rate

The Power Range Positive Rate trip provides protection against rapid flux increases which are characteristic of a rupture of a control rod drive housing. Specifically, this trip complements the Power Range Neutron Flux High and Low trips to ensure that the criteria are met for all rod ejection accidents.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. Manual Reactor Trip	2	1	2	1, 2	1
	2	1	2	3*, 4*, 5*	11
2. Power Range, Neutron Flux					
a. High Setpoint	4	2	3	1, 2	2
b. Low Setpoint	4	2	3	1###, 2	2
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4. Deleted					
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux					
a. Startup	2	1	2	2##	4
b. Shutdown	2	1	2	3*, 4*, 5*	11
7. Overtemperature ΔT					
a. Four Loop Operation	4	2	3	1, 2	6
b. Three Loop Operation	3	2	2	1, 2	6
8. Overpower ΔT					
a. Four Loop Operation	4	2	3	1, 2	6
b. Three Loop Operation	3	2	2	1, 2	6
9. Pressurizer Pressure--Low	4	2	3	1**	6 (1)
10. Pressurizer Pressure--High	4	2	3	1, 2	6 (1)
11. Pressurizer Water Level--High	3	2	2	1**	6

MILLSTONE - UNIT 3
0223

3/4 3-2

Amendment No. 57, 58, 116

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R(14)	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux a. High Setpoint	S	D(2, 4), M(3, 4), Q(4, 6), R(4, 5)	Q	N.A.	N.A.	1, 2
b. Low Setpoint	S	R(4, 5)	S/U(1)	N.A.	N.A.	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4, 5)	Q	N.A.	N.A.	1, 2
4. Deleted						
5. Intermediate Range	S	R(4, 5)	S/U(1)	N.A.	N.A.	1***, 2
6. Source Range, Neutron Flux	S	R(4, 5)	S/U(1), Q(9)	N.A.	N.A.	2**, 3, 4, 5
7. Overtemperature ΔT	S	R	Q	N.A.	N.A.	1, 2
8. Overpower ΔT	S	R	Q	N.A.	N.A.	1, 2
9. Pressurizer Pressure--Low	S	R	Q(18)	N.A.	N.A.	1
10. Pressurizer Pressure--High	S	R	Q(18)	N.A.	N.A.	1, 2
11. Pressurizer Water Level--High	S	R	Q	N.A.	N.A.	1
12. Reactor Coolant Flow--Low	S	R	Q	N.A.	N.A.	1



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 116

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 January 10, 1995, the Northeast Nuclear Energy Company, (the licensee), submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 3 Technical Specifications (TS). The requested changes would revise the Technical Specifications to delete the power range negative flux trip from Tables 2.2-1, 3.3-1, and 4.3-1, and delete the associated Bases Section 2.0.

2.0 BACKGROUND

A plant safety analysis supporting the use of VANTAGE 5 fuel at Millstone 3 was submitted to the Nuclear Regulatory Commission (NRC) in an application for amendment dated November 1, 1990. The NRC staff subsequently found the safety analysis for VANTAGE 5 fuel acceptable and issued Amendment No. 60 on March 11, 1991. The safety analysis provided mechanical, nuclear, electrical, and hydraulic accident evaluations. In the accident analyses, the dropped rod cluster control assembly (RCCA) event did not take credit for any direct reactor trip or for an automatic power reduction due to the dropped RCCA. Therefore, no credit was taken for the negative flux rate trip in the plant safety analyses. Since the negative flux rate trip was not credited in the accident analysis, the licensee has proposed to delete the negative flux rate trip from the functional unit of the reactor trip system instrumentation setpoints.

3.0 EVALUATION

The licensee proposed to delete the negative flux rate trip from the TS. The proposed changes affect TS Bases Section 2.0, and Tables 2.2-1, 3.3-1, and 4.3-1. The basis for these changes lies in the safety analyses for VANTAGE 5 fuel in which no credit was taken in the plant safety analysis for the negative flux rate trip. Any reference to the power range negative rate trip will be deleted from the aforementioned TS Tables and the associated Bases Section. The proposed changes were reviewed by the NRC staff and found to be acceptable. The revised TSs do not reduce plant safety since the plant safety analyses did not take credit for the negative flux rate trip.

4.0 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.

5.0 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 (60 FR 11135). 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.

6.0 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: G. Schwenk

Date: July 11, 1995