November 23, 1992

Docket No. 50-423

Mr. John F. Opeka
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Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
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Dear Mr. Opeka:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M83015)

The Commission has issued the enclosed Amendment No. 70 to Facility Operating License No. NPF-49 for Millstone Nuclear Power Station, Unit No. 3, in response to your application dated March 3, 1992, with clarifying information provided by letter dated July 13, 1992.

The amendment changed the Technical Specifications to allow longer surveillance test intervals and allowed outage times for the reactor protection system and the engineered safety features actuation system. Also it removes the requirement to perform the reactor trip system analog channel operational test on a staggered basis.

A copy of the related Safety Evaluation is enclosed. Also enclosed is the notice of issuance which has been forwarded to the Office of the Federal Register for publication.

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. 70 to NPF-49
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

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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. 70
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 March 3, 1992, as supplemented July 13, 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. 70 , 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

Albert W. DeAgazio for

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: November 23, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 70

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.

Remove	Insert
3/4 3-3	3/4 3-3
3/4 3-4	3/4 3-4
3/4 3-7	3/4 3-7
3/4 3-10	3/4 3-10
3/4 3-11	3/4 3-11
3/4 3-13	3/4 3-13
3/4 3-14	3/4 3-14
3/4 3-17	3/4 3-17
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-23	3/4 3-23
3/4 3-24	3/4 3-24
3/4 3-25	3/4 3-25
3/4 3-30	3/4 3-30
3/4 3-36	3/4 3-36
3/4 3-37	3/4 3-37
3/4 3-38	3/4 3-38
3/4 3-39	3/4 3-39
3/4 3-40	3/4 3-40

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
12. Reactor Coolant Flow--Low					
a. Single Loop (Above P-8)	3/loop in each operating loop	2/loop in any operating loop	2/loop in each operating loop	1	6
b. Two Loops (Above P-7 and below P-8)	3/loop in each operating loop	2/loop in two operating loops	2/loop each operating loop	1	6
13. Steam Generator Water Level--Low-Low	4/stm. gen. in each operating stm. gen.	2/stm. gen. in any operating stm. gen.	3/stm. gen. each operating stm. gen.	1, 2	6 (1)
14. Low Shaft Speed--Reactor Coolant Pumps					
a. Four loop operation	4-1/pump	2	3	1**	6
b. Three loop operation	3-1/pump	2	2	1**	6
15. Turbine Trip					
a. Low Fluid Oil Pressure	3	2	2	1***	12
b. Turbine Stop Valve Closure	4	4	4	1***	6
16. Safety Injection Input from ESF	2	1	2	1, 2	13A
17. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6	2	1	2	2##	8
b. Low Power Reactor Trips Block, P-7					
P-10 Input	4	2	3	1	8
or					
P-13 Input	2	1	2	1	8

Amendment No. 57, 70

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
17. Reactor Trip System Interlocks (Continued)					
c. Power Range Neutron Flux, P-8	4	2	3	1	8
d. Power Range Neutron Flux, P-9	4	2	3	1	8
e. Power Range Neutron Flux, P-10	4	2	3	1,2	8
18. Reactor Trip Breakers	2	1	2	1, 2	10, 13
	2	1	2	3*, 4*, 5*	11
19. Automatic Trip and Interlock Logic	2	1	2	1, 2	13A
	2	1	2	3*, 4*, 5*	11
20. Three Loop Operation Bypass Circuitry	8 (1 switch per loop in each train)	2 (From different loop switches in bypass)	8	1, 2	1
21. Shutdown Margin Monitor	2	0	2	3@, 4, 5	5

ACTION STATEMENTS (Continued)

ACTION 9 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours. One channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.

ACTION 10 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

ACTION 11 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor Trip System breakers within the next hour.

ACTION 12 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. When the Minimum Channels OPERABLE requirement is met, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of the Turbine Control Valves.

ACTION 13 - With one of the diverse trip features (undervoltage or shunt trip attachments) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply ACTION 10. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

ACTION 13A - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable Channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is operable.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANC IS REQUIRED
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)	S/U(1)	N.A.	N.A.	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4)	Q	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4)	Q	N.A.	N.A.	1, 2
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

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	MODES FOR WHICH ACTUATION LOGIC TEST	SURVEILLANCE IS REQUIRED
13. Steam Generator Water Level--Low-Low	S	R	Q(18)	N.A.	N.A.	1, 2
14. Low Shaft Speed - Reactor Coolant Pumps	N.A.	R(13)	Q	N.A.	N.A.	1
15. Turbine Trip						
a. Low Fluid Oil Pressure	N.A.	R	N.A.	S/U(1, 10)****	N.A.	1
b. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)****	N.A.	1
16. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R	N.A.	1, 2
17. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4)	R	N.A.	N.A.	2**
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	R	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4)	R	N.A.	N.A.	1
d. Power Range Neutron Flux, P-9	N.A.	R(4)	R	N.A.	N.A.	1
e. Power Range Neutron Flux, P-10	N.A.	R(4)	R	N.A.	N.A.	1, 2
f. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

TABLE NOTATIONS

* When the Reactor Trip System breakers are closed and the Control Rod Drive System is capable of rod withdrawal.

** Below P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.

*** Below P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.

**** Above the P-9 (Reactor Trip/Turbine Interlock) Setpoint.

(1) If not performed in previous 31 days.

(2) Comparison of calorimetric to excore power indication above 15% of RATED THERMAL POWER. Adjust excore channel gains consistent with calorimetric power if absolute difference is greater than 2%. The provisions of Specification 4.0.4 are not applicable to entry into MODE 2 or 1.

(3) Single point comparison of incore to excore AXIAL FLUX DIFFERENCE above 15% of RATED THERMAL POWER. Recalibrate if the absolute difference is greater than or equal to 3%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(4) Neutron detectors may be excluded from CHANNEL CALIBRATION.

(5) Detector plateau curves shall be obtained, and evaluated and compared to manufacturer's data. For the Intermediate Range and Power Range Neutron Flux channels the provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(6) Incore - Excore Calibration, above 75% of RATED THERMAL POWER. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(7) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(8) (Not used)

(9) Quarterly surveillance in MODES 3*, 4*, and 5* shall also include verification that permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window.

TABLE 4.3-1 (Continued)

TABLE NOTATIONS (Continued)

(10) Setpoint verification is not applicable.

(11) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.

(12) (not used)

(13) Reactor Coolant Pump Shaft Speed Sensor may be excluded from CHANNEL CALIBRATION.

(14) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).

(15) Local manual shunt trip prior to placing breaker in service.

(16) Automatic undervoltage trip.

(17) (not used).

(18) The surveillance frequency and/or MODES specified for these channels in Table 4.3-2 should be reviewed for applicability.

(19) Quarterly surveillance shall include verification that the Shutdown Margin Monitor is set per the CORE OPERATING LIMITS REPORT (COLR).

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Safety Injection (Reactor Trip, Feedwater Isolation, Control Building Isolation (Manual Initiation Only), Start Diesel Generators, and Service Water).					
a. Manual Initiation	2	1	2	1, 2, 3, 4	19
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
c. Containment Pressure--High-1	3	2	2	1, 2, 3	20
d. Pressurizer Pressure--Low	4	2	3	1, 2, 3#	20
e. Steam Line Pressure--Low	3/steam line in each operating loop	2/steam line in any operating loop	2/steam line in each operating loop	1, 2, 3#	20
2. Containment Spray (CDA)					
a. Manual Initiation	2	1 with 2 coincident switches	2	1, 2, 3, 4	19

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
3) Containment Pressure--High-3	4	2	3	1, 2, 3, 4	17
4. Steam Line Isolation					
a. Manual Initiation					
1) Individual	1/steam line	1/steam line	1/operating steam line	1, 2, 3, 4	24
2) System	2	1	2	1, 2, 3, 4	23
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	22
c. Containment Pressure--High-2	3	2	2	1, 2, 3, 4	20
d. Steam Line Pressure--Low	3/steam line in each operating loop	2/steam line in any operating loop	2/steam line in each operating loop	1, 2, 3#	20
e. Steam Line Pressure - Negative Rate--High	3/steam line in each operating loop	2/steam line in any operating loop	2/steam line in each operating loop	3****	20

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. Turbine Trip and Feedwater Isolation					
a. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2	25
b. Steam Generator Water Level--High-High (P-14)	4/stm. gen. in each operating loop	2/stm. gen. in any operating loop	3/stm. gen. in each operating loop	1, 2, 3	20, 21
c. Safety Injection Actuation Logic	2	1	2	1, 2	22
d. T_{ave} Low Coincident with P-4					
1) Four Loops Operating	1 T_{ave}/loop	1 T_{ave} in any two loops	1 T_{ave} in any three loops	1, 2	20
2) Three Loops Operating	1 T_{ave} operating loop	1 T_{ave} in any two operating loops	1 T_{ave} in any two operating loops	1, 2	16

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
9. Engineering Safety Features Actuation System Interlocks					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	21
b. Low-Low T_{avg}, P-12	4	2	3	1, 2, 3	21
c. Reactor Trip, P-4	2	2	2	1, 2, 3	23
10. Emergency Generator Load Sequencer	2	1	2	1, 2, 3, 4	14

TABLE 3.3-3 (Continued)
TABLE NOTATIONS

#The Steamline Isolation Logic and Safety Injection Logic for this trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

**The Safety Injection Logic for this trip function may be blocked in this MODE below the P-12 (Low-Low T_{avg} Interlock) Setpoint.

***The channel(s) associated with the protective functions derived from the out of service reactor coolant loop shall be placed in the tripped mode.

****Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 15 - (not used).

ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required ANALOG CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

ACTION 18 - With less than the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the Control Room Emergency Ventilation System in the recirculation mode of operation.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 19 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 20 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. the Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 21 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 22 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 23 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 24 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.

ACTION 25 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
8. Loss of Power					
a. 4 kV Bus Undervoltage (Loss of Voltage)	N.A.	N.A.	N.A.	≥ 2800 volts with a ≤ 2 second time delay.	≥ 2720 volts with a ≤ 2 second time delay.
b. 4 kV Bus Undervoltage (Grid Degraded Voltage)	N.A.	N.A.	N.A.	≥ 3710 volts with a ≤ 8 second time delay with ESF actuation or ≤ 300 second time delay without ESF actuation.	≥ 3706 volts with a ≤ 8 second time delay with ESF actuation or ≤ 300 second time delay without ESF actuation.
9. Engineered Safety Features Actuation System Interlocks					
a. Pressurizer Pressure, P-11	N.A.	N.A.	N.A.	≤ 1985 psig	≤ 1995 psig
b. Low-Low T_{avg}, P-12	N.A.	N.A.	N.A.	≥ 553°F	≥ 549.6°F
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	N.A.	N.A.
10. Emergency Generator Load Sequencer	N.A.	N.A.	N.A.	N.A.	N.A.

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Safety Injection (Reactor Trip, Feedwater Isolation, Control Building Isolation (Manual Initiation Only), Start Diesel Generators, and Service Water)								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Pressurizer Pressure-Low	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Low	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2. Containment Spray								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4

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TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation								
a. Phase "A" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
b. Phase "B" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A	1, 2, 3, 4
2) Automatic Actuation Logic Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Containment Pressure-High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
4. Steam Line Isolation								
a. Manual Initiation								
1) Individual	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) System	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. Steam Line Isolation (Continued)								
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-High-2	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3, 4
d. Steam Line Pressure-Low	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Negative Rate-High	S	R	Q	N.A.	N.A.	N.A.	N.A.	3
5. Turbine Trip and Feedwater Isolation								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2
b. Steam Generator Water Level-High-High	S	R	Q	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Safety Injection Actuation Logic	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2
d. T_{ave} Low Coincident with Reactor Trip (P-4)	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation and Actuation Relays	N.A.	N.A	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level-Low-Low	S	R	Q	N.A.	N.A.	N.A	N.A	1, 2, 3
d. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
e. Loss-of-Offsite Power	See Item 8 below for all Loss of Power Surveillance.							
f. Containment Depressurization Actuation (CDA)	See Item 2. above for all CDA Surveillance Requirements.							
7. Control Building Isolation								
a. Manual Actuation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	All
b. Manual Safety Injection Actuation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
c. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
d. Containment Pressure-- High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
7. Control Building Isolation (Continued)								
e. Control Building Inlet Ventilation Radiation	S	R	Q	N.A.	N.A.	N.A.	N.A.	All
8. Loss of Power								
a. 4 kV Bus Undervoltage (Loss of Voltage)	N.A.	R	N.A	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. 4 kV Bus Undervoltage (Grid Degraded Voltage)	N.A.	R	N.A.	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
9. Engineered Safety Features Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Low-Low T_{avg}, P-12	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
10. Emergency Generator Load Sequencer	N.A.	N.A.	N.A.	N.A.	Q(1, 2)	N.A.	N.A.	1, 2, 3, 4

Amendment No. 14, 45, 70

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 70

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 application for amendment dated March 3, 1992, with clarifying information provided by letter dated July 13, 1992, Northeast Nuclear Energy Company, the licensee for Millstone Nuclear Power Plant, Unit 3, requested a revision to Facility Operating License No. NPF-49, by incorporating changes to technical specifications (TS) allowing longer surveillance test intervals (STIs) and allowed outage times (AOTs) for the reactor protection system (RPS) and engineered safety features actuation system (ESFAS) instrumentation. Also it removes the requirement to perform the RPS analog channel operational test on a staggered basis. This proposed modification to the TS would minimize the potential number of inadvertent ESFAS actuation and reactor trips during surveillance testing, increase operational effectiveness of plant personnel, and allow resources to be used for other tasks such as preventive maintenance. In addition, the increased AOTs would result in fewer human errors since more time would be allowed to perform test and maintenance actions.

2.0 BACKGROUND

Operating utilities have become increasingly aware of the effects of current surveillance test intervals and maintenance requirements on plant operation. Inadvertent reactor trips have occurred that could be attributed to human errors during performance of these activities. Human errors were found to be directly proportional to the frequency of surveillance tests (STs) and inversely proportional to the time allowed for an inoperable channel to remain in a bypassed condition before repairs could be made. Thus, a greater frequency of STs and shorter AOTs were, in part, responsible for inadvertent trips and challenges to safety systems.

To resolve the above concerns, the Westinghouse Owners Group (WOG) initiated a program to evaluate the effect of such undesirable events and proposed TS changes to increase STIs and AOTs as remedial actions to preclude inadvertent trips and challenges to the safety systems while maintaining the benefits of

routine tests and maintenance activities to ensure the reliability of the reactor trip system (RTS) and ESFAS instruments.

3.0 PRE-APPROVED REVISIONS AND ASSOCIATED CONDITIONS

The WOG published results of its study and proposals for remedial actions in 1983 in the original WCAP-10271. This document was later revised several times in response to NRC's comments and the current version of WCAP-10271, Supplement 2, Revision 1, was published on May 12, 1987. The staff reviewed all versions of WCAP-10271 including WOG's responses to staff's questions on these submittals. During this review, the NRC staff engaged the services of Brookhaven National Laboratory (BNL) to evaluate the approach used and the analyses performed in the WOG reports. BNL determined the adequacy of WOG's methodology to establish technical bases for unavailability data, reliability calculations, and proposed STI/AOT extensions. After the NRC staff and BNL staff had completed their review the NRC issued three safety evaluation reports (SERs): RTS SER on February 21, 1985, ESFAS SER on February 22, 1989, and a supplemental SER (SSER) on April 30, 1990. These SERs approved various TS changes relating to extending STIs, test/maintenance AOTs, and bypass time for instrument channels in RTS, ESFAS, and the logic cabinets for these systems. In the SERs, the NRC staff approved extensions to STIs/AOTs as well as to the time during which the instrument channels could be bypassed. However, the staff stipulated certain conditions that licensees must meet to include these pre-approved changes in plant-specific TS. The pre-approved changes and associated conditions are addressed below.

3.1 Pre-Approved Changes

As mentioned above, the NRC staff stipulated certain conditions to be met before the approved TS changes to RTS and ESFAS and to the logic cabinets of these systems could be made in any plant-specific TS. The pre-approved TS changes are described below and the associated conditions are described in section 3.2 of this report.

3.1.1 SER issued on February 21, 1985 (RTS SER). In this SER the staff approved the following TS changes relating to RTS instruments only.

(1) STI for RTS analog channel operational testing may be increased from once a month to once per quarter.

(2) The duration for which an inoperable RTS analog channel may be maintained in an untripped condition may be increased from 1 hour to 6 hours.

(3) The duration for which an inoperable RTS channel may be bypassed to allow testing of another channel in the same function may be increased from 2 hours to 4 hours. Also, the channel test may be done in the bypass mode, leaving the inoperable channel in a tripped condition.

(4) Testing of RTS analog channels in a bypassed condition instead of a tripped condition will be allowed.

3.1.2 SER issued on February 22, 1989, (ESFAS SER). In this SER, the staff approved the following TS changes relating to ESFAS instruments:

(1) The STIs for the analog channels may be increased from 1 month to 3 months.

(2) The AOTs for testing of analog channels may be increased from 2 hours to 4 hours for both relays and solid state systems.

(3) The AOTs for testing all components may be up to 4 hours in solid state systems.

(4) In relay systems, the AOT for testing of the logic trains and master relays could be increased to 8 hours and for the slave relays to 12 hours.

(5) The AOTs for maintenance on all components may be extended to 12 hours for both relays and solid state systems. All components except the analog channels could be in the bypass mode during maintenance AOT, with an analog channel tripped after spending 6 hours in the bypass mode.

(6) Staggered testing is not required for analog channels in the ESFAS and this requirement may be removed for analog channels in RTS.

3.1.3 Supplemental SER issued on April 30, 1990, (SSER). The staff's approval of the proposed STI/AOT extensions for the logic cabinets and reactor trip breakers for the RTS system was based on its evaluation of Appendix D to the WCAP-10271, Supplement 2, Revision 1. The RTS and ESFAS share some common instrumentation; therefore it was necessary to consider STI/AOT extensions for RPS logic cabinets. The staff's conclusions are given below.

(1) The AOT extensions for the RPS logic cabinets as presented in Appendix D are acceptable. These are 4 hours for testing and 12 hours for maintenance instead of 2 hours and 6 hours, respectively.

(2) The STI/AOT extensions (covered by the ESFAS SER) for ESFAS functions associated with the Safety Injection, Steam Line Isolation, Main Feedwater Isolation, and Auxiliary Feedwater Pump Start Signals are acceptable.

(3) The STI/AOT extensions proposed in Appendix D are not acceptable for reactor trip breakers because the extensions would reduce availability of these breakers.

3.2 Associated Conditions for Approval

3.2.1 For the RTS SER Changes.

(1) Performance of testing shall be done on a staggered basis. (This condition was later removed by the ESFAS SER.)

(2) Procedures should be implemented to evaluate test-failures for common cause and additional testing should be performed if necessary.

(3) Approval of channel testing (items 3.1.1.(3) and (4) above) in a bypassed condition assumes that the plant design allows such testing without lifting any leads or installing jumpers.

3.2.2 For SSER changes:

(1) Acceptance of item 3.1.3.(1) is contingent on including a separate new action statement for modes 1 and 2 for RPS Automatic Trip and Interlock Logic Functional Units. The model Action Statement given below is in the format of Westinghouse Standard Technical Specifications, Revision 4, Table 3.3-1.

> ACTION 12 - With the number of OPERABLE Channels (analog channels and trip logic) one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

3.2.3 Expeditious Review: In the letters transmitting the ESFAS SER and SSER, the staff indicated that a licensee's request for the proposed changes to the plant-specific TS will be expeditiously reviewed by the staff provided, the licensee:

(1) Confirms the applicability of the generic analyses of WCAP-10271, Supplement 2 Revision 0 and Revision 1 to its plant.

(2) Confirms that any increase in instrument drift as a result of the extended STIs has been properly accounted for in setpoint calculation methodology.

(3) Confirms that the proposed TS changes are consistent with those approved by the staff in the SERs.

4.0 EVALUATION OF PROPOSED REVISIONS

The staff evaluated the licensee's proposed Millstone Unit 3 TS changes to verify that they are consistent with pre-approved changes and that the licensee has met all the conditions associated with those changes.

4.1 Verification that Proposed Changes are consistent with the Pre-Approved Changes

4.1.1 Section 3.3.1, Table 3.3-1, Functional Units 16 and 19

Proposed Change: Add new ACTION 13A to allow 6 hours to restore an inoperable channel to operable status before requiring shutdown to HOT STANDBY within the next 6 hours and to allow bypass of a channel for up to 4 hours for surveillance testing, provided the other channel is operable. Make this new ACTION statement applicable to Functional Units 16 (Safety Injection Input From ESF) and 19 (Automatic Trip and Interlock Logic), rather than ACTION 10.

Evaluation: For Functional Units 16 and 19, if the number of operable channels is one less than the minimum operable required, the existing ACTION 10 requires the plant "to be in at least HOT STANDBY within 6 hours, however, one channel may be bypassed for up to 2 hours for surveillance test provided the other channel is operable."

The new ACTION 13A allows 6 hours to restore the inoperable channel before requiring shutdown to HOT STANDBY within the next 6 hours, and allows bypassing one channel up to 4 hours, instead of 2 hours, for surveillance testing.

The above change is acceptable because it is consistent with pre-approved change as described in section 3.2.2.(1) of this evaluation.

4.1.2 Section 4.3.1.1, Table 4.3-1, Functional Units 2 Through 4 and 6 Through 14

(1) Proposed Change: Delete Note 17, which requires channels to be tested at least every 92 days on a staggered test basis.

Evaluation: The revision to the TS removes the requirement to test the following channels on a staggered test basis.

- Power range neutron flux high setting,
- Power range neutron flux high positive rate,
- Power range neutron flux high negative rate,
- Source range neutron flux,
- Over temperature delta T,
- Over power delta T,

- o Pressurizer pressure low,
- o Pressurizer pressure high,
- o Pressurizer level high,
- o Reactor coolant flow low,
- o Steam generator (SG) water level low-low, and
- o Reactor coolant system (RCS) pump speed low.

The above change is acceptable because it is consistent with the pre-approved changes described in section 3.1.2.(6) of this evaluation.

(2) Proposed change: Revise Note 18 to indicate that Table 4.3-2 should be reviewed for applicability.

Evaluation: The existing Note 18 requires that RTS instrument channels, for Functional Units 9 (Pressurizer pressure low) and 10 (Pressurizer pressure high), channels should be tested per surveillance frequency and/or mode as described in table 4.3-2 (for ESF instrumentation channels), because these requirements were more restrictive. The revision to Note 18 would require operators to review requirements of table 4.3-2 for its applicability. The new table does not revise applicable modes but does revise the frequency of ST from once per month to once per quarter. The above change is an editorial change to clarify the existing Note 18. This is acceptable to the staff.

4.1.3 Section 3.3.2, Table 3.3-3

(1) Functional Units 1.c, 1.e, 4.c, 4.d, and 4.e.

Proposed Change: Delete ACTION 15, which requires that an inoperable channel be placed in the operable condition within 1 hour, and replace with ACTION 20, which requires an inoperable channel to be placed in the tripped condition within 6 hours.

Evaluation: For ESFAS functional units 1c (containment pressure high), 1e(steam line pressure low), 4c(containment pressure high), 4d(steam line pressure low) and 4e(steam line pressure-negative rate high), in a condition with the number of operable channels one less than the required minimum operable channels, the existing ACTION 15 allows startup and/or power operation to proceed until performance of the next required analog channel operational test, provided the inoperable channel is placed in the tripped position within 1 hour.

The revised ACTION 20 requires the inoperable channel be placed in the tripped condition within 6 hours and, if the requirement for the minimum operable channels is met, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

Thus the time for putting the inoperable channel in the tripped condition is extended from 1 hour to 6 hours, and bypassing the inoperable channel for up to 4 hours is allowed while the other channels are being tested.

The above change is acceptable because it is consistent with the pre-approved change as described in sections 3.1.1.(2), 3.1.1.(3), and 3.1.2.(2) of this evaluation.

(2) ACTIONS 14, 22, and 25

Proposed Change: Revise ACTIONS 14, 22, and 25 to allow 6 hours to restore an inoperable channel to operable status before requiring shutdown to HOT STANDBY within the next 6 hours and increase the allowed bypassed time from 2 to 4 hours for surveillance testing.

Evaluation: With the number of OPERABLE channels one less than the allowed minimum operable channels, the existing ACTION statements 14, 22, and 25 require the plant to be in HOT STANDBY within 6 hours, however, one channel may be bypassed up to 2 hours for surveillance testing provided the other channel is operable.

The revised ACTION statements allow 6 hours to restore an inoperable channel before requiring shutdown to HOT STANDBY within the next 6 hours and increase the allowed bypassed time from 2 hours to 4 hours for surveillance testing.

The above change is acceptable because it is consistent with the pre-approved change as described in sections 3.1.1.(3), 3.1.2.(2) and 3.2.2.(1) of this evaluation.

(3) ACTION 17

Proposed Change: Revise ACTION 17 to increase the time a second containment pressure High-3 channel may be bypassed to allow testing of the channel from 2 to 4 hours.

Evaluation: With the number of OPERABLE channels one less than the total number of channels, ACTION 17 of existing TS allows operation to proceed provided the inoperable channel is placed in the bypassed condition and the requirement for the minimum channels operable is met. One additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

The revision to the action statement allows a channel to be bypassed up to 4 hours, instead of 2 hours for surveillance testing.

The above change is acceptable because it is consistent with the pre-approved changes described in 3.1.1.(3) of this evaluation.

(4) ACTION 20

Proposed Change: Revise ACTION 20.a to increase the time an inoperable channel may be maintained in an untripped condition from 1 to 6 hours. Revise ACTION 20.b to increase the time an inoperable channel may be bypassed to allow surveillance testing of other channels in the same function from 2 to 4 hours. For ACTION 20.b, change "one additional" to "the inoperable."

Evaluation: With the number of operable channels one less than the total number of channels, ACTION 20 of existing TS allows startup and/or power operation to proceed provided the inoperable channel is placed in the tripped condition within 1 hour and the requirement for the minimum channels operable is met; however, one additional channel may be bypassed up to 2 hours for surveillance testing.

The revision to the action statement allows up to 6 hours, instead of 1 hour, for putting a channel in the tripped condition and allows for up to 4 hours, instead of 2 hours, for the inoperable channel, instead of an additional channel, to be in a bypassed status for surveillance testing.

The above change is acceptable because it is consistent with the pre-approved changes described in sections 3.1.1.(2) and 3.1.1.(3) of this evaluation.

4.1.4 Section 4.3.2.1, Table 4.3-2, Functional Units 1.c, 1.d, 1.e, 2.c, 3.b.3, 4.c, 4.d, 4.e, 5.b, 5.d, 6.c, 7.d, 7.e, 9.a, and 9.b.

Proposed Change: Revise the analog channel operational test entries to increase the STI from monthly to quarterly for all the above functional units generically approved for such change by the NRC via WCAP-10271.

Evaluation: STI for these ESF instruments per existing TS Table 4.3-2 requirement is monthly. The revision to the Table 4.3-2 changes the STI for these instruments from monthly to quarterly.

The above change is acceptable because it is consistent with the pre-approved changes described in section 3.1.1.(1) of this evaluation.

4.1.5. Tables 3.3-3, 3.3-4, and 4.3-2, Functional Unit 9d

Proposed Change: The proposed TS change will delete item 9d of the tables and modify Item 5b so that duplication of guidance is eliminated. Both these above items are associated with the steam generator water level high-high signal and, under certain circumstances, keeping both items can lead to conflicting guidance. This potential ambiguity is eliminated by the proposed change.

Evaluation: The above change is acceptable because it clarifies the text and removes ambiguity.

4.1.6 Table 4.3-1, Functional Unit 15

Proposed Change: The addition of the asterisks (***) to Functional Unit 15 in Table 4.3-1 will make the Table consistent with Table 3.3-1 by requiring surveillance for the turbine trip/reactor trip interlock when above the P-9 interlock setpoint.

Evaluation: The above change is acceptable because it clarifies the text and makes the table consistent.

4.2 Verification of Conditions

Through its submittals, the licensee confirmed that it has met the SER conditions as described below.

(1) Condition 3.2.1.(1): Performance of testing on a staggered basis was stipulated by the RTS SER but, was removed by the ESFAS SER. Therefore, the licensee has removed this condition from the plant's TS. This is acceptable.

(2) Condition 3.2.1.(2): The licensee stated that a procedure to evaluate surveillance test failures of the RTS channels for common mode failures and to provide for additional testing when necessary has been implemented at Millstone Unit 3. This is acceptable.

(3) Condition 3.2.1.(3): The licensee stated that the Millstone Unit 3 design allows plant personnel to test the channels in a bypass mode and does not require lifting of wires or installation of temporary jumpers. This is acceptable.

(4) Condition 3.2.3.(1): The generic analyses used in WCAP-10271 and its supplements are applicable to Millstone Unit 3. The licensee uses the Westinghouse process control system and the Westinghouse solid state protection System for both ESFAS and RTS. These systems were specifically modeled in the generic analyses. Therefore, the ESFAS Functional Units implemented at Millstone Unit 3 are all addressed by the generic analyses and consistent with the pre-approved TS changes. This is acceptable.

(5) Condition 3.2.3.(2): The licensee performed a review of the plant's data over 1 year, and committed to extend this review for 2 years. On conclusion of this review and before changing STI from 1 month to 3 months, the licensee will verify that resulting value of the drift is acceptable for increasing STI from 1 month to 3 months. The licensee made these commitments by letter dated July 13, 1992. This is acceptable to the staff.

5.0 SUMMARY

The staff reviewed the licensee's evaluation and agrees with its conclusions that:

(a) Although the changes do cause an increase in the unavailability of the ESFAS and RTS thereby, the resultant increase in the core damage frequency (CDF), is very low. Further, the changes are justified in light of the potential reductions in the inadvertent tripping of ESFAS or RTS functions causing plant perturbations, some of which may result in advertent trip(s).

(b) The proposed changes will not result in physical alteration to any plant system or in the plant operating procedures. Therefore, there can be no impact on plant response to the point where a different accident is created.

(c) The proposed changes do not alter the manner in which the safety limits, limiting safety system setpoints and limiting conditions for operation are determined. The impact of reduced testing is to allow a longer time interval over which instrument uncertainties such as "drift" or failure rates may act, but the commitment from the licensee to monitor and address increases in uncertainty due to drift resolved this concern.

In addition, the staff believes that implementation of the proposed TS changes would result in following benefits.

1. Reduced testing will result in fewer inadvertent reactor trips, less frequent actuation of ESFAS components, and less frequent distraction of operations personnel.

2. Improvements in the effectiveness of the operating staff in monitoring and controlling plant operation will be realized. This is due to less frequent distraction of the operators and shift supervisor when attending to instrumentation testing.

3. Longer repair times associated with increased AOTs would lead to higher quality repairs and therefore would improve reliability.

The above benefits would result in an improvement in safety.

6.0 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.

7.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on November 19, 1992 (57 FR 54622). Accordingly, based upon the environmental assessment, we have determined that the issuance of the amendment will not have a significant effect on the quality of the human environment.

8.0 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: S. V. Athavale

Date: November 23, 1992

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO. 50-423

NOTICE OF ISSUANCE OF AMENDMENT TO

FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 70 to Facility Operating License No. NPF-49 issued to Northeast Nuclear Energy Company, et al., which revised the Technical Specifications for operation of the Millstone Nuclear Power Station, Unit No. 3., located in New London County, Connecticut. The amendment is effective as of the date of issuance.

The amendment changes Technical Specification (TS) 3/4.3.1 and 3/4.3.2 to increase the surveillance test intervals and allowed outage time and channel bypass times for certain instrumentation in the reactor trip system (RTS) and engineered safety features actuation system. Also it removes the requirement to perform the RTS analog channel operational test on a staggered basis.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on July 7, 1992 (57 FR 29908). No request for a hearing or petition for leave to intervene was filed following this notice.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human environment.

For further details with respect to the action see (1) the application for amendment dated March 3, 1992, as supplemented July 13, 1992, (2) Amendment No. 70 to License No. NPF-49, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the Learning Resources Center, Thames Valley Technical College, 574 New London Turnpike, Norwich, Connecticut 06360. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Document Control Desk.

Dated at Rockville, Maryland this 23rd day of November 1992

FOR THE NUCLEAR REGULATORY COMMISSION

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
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