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Docket File
NRC PDR
ORB#3 Rdg
DEisenhut
PMKreutzer
PHLeech
OELD
SECY
LJHarmon
EJordan
JTaylor
TBarnhart (4)
WJones
DBrinkman
ACRS (10)
OPA, CMiles
RDiggs
RBallard
NSIC
HDenton
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Docket No. 50-336

Mr. W. G. Counsil, Senior Vice President
Nuclear Engineering and Operations
Northeast Nuclear Energy Company
P. O. Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Counsil:

SUBJECT: BORIC ACID FLOW PATH REQUIREMENTS - MILLSTONE NUCLEAR POWER STATION, UNIT 2.

The Commission has issued the enclosed Amendment No. 88 to Facility Operating License No. DPR-65 for Millstone Nuclear Power Station, Unit 2, in response to your application dated September 24, 1982.

This amendment modifies Technical Specification 3.1.2.2 to be consistent with TS 3.5.2 requirements that both boric acid tanks and corresponding facility dependent flow paths are operable in the modes in which operability is required for ECCS considerations. As discussed with your staff, the reference in TS 3.1.2.6 to specification 3.1.2.2 has also been changed appropriately.

We have reviewed the bases for the proposed changes and concluded that they are technically correct. They also clarify the requirements for boration system flow paths utilized in reactivity control and emergency core cooling systems. Therefore, we find the proposed changes in the technical specifications to be acceptable.

A copy of our Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next monthly Federal Register notice.

Sincerely,

Original signed by:

Paul H. Leech, Project Manager
Operating Reactors Branch #3
Division of Licensing

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Enclosures:
1. Amendment No. 88 to DPR-65
2. Safety Evaluation

Immediately before opening check for Petitioner Comments. Deny, CMB Protested

No legal objection MWR

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SURNAME	PKreutzer	PHLeech:dd	JRMiller	GCLainas	M. Rothchild		
DATE	9/21/83	9/21/83	9/27/83	9/27/83	9/30/83		

Northeast Nuclear Energy Company

cc:

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

NORTHEAST NUCLEAR ENERGY COMPANY

THE CONNECTICUT LIGHT AND POWER COMPANY

THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 88
License No. DPR-65

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northeast Nuclear Energy Company, et al. (the licensee) dated September 24, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 88 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective on the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 11, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 88

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Remove and 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 area of change. The corresponding overleaf pages are provided to maintain document completeness.

Remove	Insert
3/4 1-10	3/4 1-10
3/4 1-11	3/4 1-11
3/4 1-15	3/4 1-15

SURVEILLANCE REQUIREMENTS

b. At least once per 31 days by verifying the correct position of all manually operated valves in the boron injection flow path not locked, sealed or otherwise secured in position.

FLOW PATHS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2.1 Two flow paths from the boric acid storage tanks via either a boric acid pump or gravity feed connection and a charging pump to the Reactor Coolant System and one associated heat tracing circuit shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3*.

ACTION:

With only one of the above required boron injection flow paths to the Reactor Coolant System OPERABLE, restore at least two boron injection flow paths to the Reactor Coolant System to OPERABLE status within 48 hours or make the reactor subcritical within the next 2 hours, borate to a SHUTDOWN MARGIN equivalent to at least 1% $\Delta k/k$ at 200°F, and restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 36 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.2.1 The two required flow paths shall be demonstrated OPERABLE:

a. At least once per 7 days by:

   1. Exercising all testable power operated valves in each flow path through at least one complete cycle,

   2. Verifying that the temperature of the heat traced portion of the flow path from the concentrated boric acid tanks is above the temperature limit line shown on Figure 3.1-1,

b. At least once per 31 days by verifying the correct position of all manually operated valves in the boron injection flow path not locked, sealed or otherwise secured in position and

c. At least once per 18 months, during shutdown, by exercising all power operated valves in each flow path through at least one complete cycle.

* With pressurizer pressure $\geq$ 1750 psia.

FLOW PATHS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2.2 At least two of the following three boron injection flow paths and one associated heat tracing circuit shall be OPERABLE:

a. Two flow paths from the boric acid storage tanks via either a boric acid pump or a gravity feed connection and a charging pump to the Reactor Coolant System and

b. The flow path from the refueling water storage tank via a charging pump to the Reactor Coolant System.

APPLICABILITY: MODES 3* and 4.

ACTION:

With only one of the above required boron injection flow paths to the Reactor Coolant System OPERABLE, restore at least two boron injection flow paths to the Reactor Coolant System to OPERABLE status within 48 hours or borate to a SHUTDOWN MARGIN equivalent to at least 1% $\Delta k/k$ at 200°F and restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 36 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.2.2 At least two of the above required flow paths shall be demonstrated OPERABLE:

a. At least once per 7 days by:

1. Exercising all testable power operated valves in each flow path at least one complete cycle,

2. Verifying that the temperature of the heat traced portion of the flow path from the concentrated boric acid tanks is above the temperature limit line shown on Figure 3.1-1,

b. At least once per 31 days by verifying the correct position of all manually operated valves in the boron injection flow path not locked, sealed or otherwise secured in position, and

c. At least once per 18 months, during shutdown, by exercising all power operated valves in each flow path through at least one complete cycle.

* With pressurizer pressure less than 1750 psia.

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 As a minimum, one charging pump or one high pressure safety injection pump in the boron injection flow path required OPERABLE pursuant to Specification 3.1.2.1 shall be OPERABLE and capable of being powered from an OPERABLE emergency bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no charging pump or high pressure safety injection pump OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one of the required pumps is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.3 The above required charging pump or high pressure safety injection pump shall be demonstrated OPERABLE at least once per 31 days by:

a. Starting (unless already operating) the pump from the control room,

b. Verifying pump operation for at least 15 minutes, and

c. Verifying that the pump is aligned to receive electrical power from an OPERABLE emergency bus.

BORIC ACID PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.6 The boric acid pump(s) in the boron injection flow path(s) required OPERABLE pursuant to Specifications 3.1.2.2.1 and 3.1.2.2.2.a shall be OPERABLE if the flow path through the boric acid pump in Specification 3.1.2.2.2.a is OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one boric acid pump required for the boron injection flow path(s) pursuant to Specifications 3.1.2.2.1 and 3.1.2.2.2.a inoperable, restore the boric acid pump to OPERABLE status within 48 hours or be in COLD SHUTDOWN within the next 36 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.6 The boric acid pump(s) shall be demonstrated OPERABLE at least once per 7 days by:

a. Starting (unless already operating) the pump from the control room,

b. Verifying that, on recirculation flow, the pump develops a discharge pressure of $\geq$ 98 psig, and

c. Verifying pump operation for at least 15 minutes.

BORATED WATER SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.7 As a minimum, one of the following borated water sources shall be OPERABLE:

a. One boric acid storage tank and one associated heat tracing circuit with the tank contents in accordance with Figure 3.1-1.

b. The refueling water storage tank with:

1. A minimum contained volume of 57,000 gallons,

2. A minimum boron concentration of 1720 ppm when in Mode 5,

3. A minimum boron concentration as defined in Specification 3.9.1 when in Mode 6.

4. A minimum solution temperature of 35°F.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no borated water sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one borated water source is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.7 The above required borated water source shall be demonstrated OPERABLE:

a. At least once per 7 days by:

1. Verifying the boron concentration of the water,

2. Verifying the water level of the tank, and

3. Verifying the boric acid storage tank solution temperature when it is the source of borated water.

b. At least once per 24 hours by verifying the RWST temperature when it is the source of borated water and the RWST ambient air temperature is < 35°F.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 88 TO FACILITY OPERATING LICENSE NO. DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

INTRODUCTION AND BACKGROUND

By letter dated September 24, 1982, Northeast Nuclear Energy Company (NNECO or the licensee) proposed a change to the Technical Specifications appended to Facility Operating License No. DPR-65 for Millstone Nuclear Power Station Unit 2. The change was intended to clarify the requirements for boration system flow paths as utilized in reactivity control and emergency core cooling systems and provide consistency between Specifications 3.1.2.2 and 3.5.2. Specifically, the requested change modified Specification 3.1.2.2 to require both boric acid tanks and two independent flow paths to the reactor coolant system to be operable in the modes in which operability is required for ECCS considerations.

The licensee considered this change to be warranted following review of an operating event on April 18-19, 1982 in which the reactor was taken from Mode 3 to 2 and Mode 2 to 1 without meeting all Limiting Conditions for Operation required for those modes. During that startup, one boric acid flow path was unavailable and operations personnel examined Specification 3.1.2.2, Reactivity Control Systems, and found that it was met because two of three stated flow paths were operable. However, the operators failed to recognize that Specification 3.5.2, Emergency Core Cooling Systems, was not met in that the unavailable flow path from the boric acid pumps was required by Specification 3.5.2.

EVALUATION

Amendment No. 52 to Facility Operating License No. DPR-65, among other things, revised Specification 3.5.2 by adding a charging pump with independent flow path from a boric acid storage tank to the composition of an ECCS subsystem. This specification requires two operable ECCS subsystems in Modes 1, 2 and 3 with pressurizer pressure greater than 1750 psia.

To provide consistency with the ECCS specification, the licensee has proposed changing Specification 3.1.2.2, Reactivity Control Systems Flow Paths - Operating, by separating it into two requirements according to applicable plant condition. The first requirement (3.1.2.2.1) assures two independent flow paths of boric acid from the storage tanks to the reactor coolant system and is applicable in Modes 1, 2 and 3 with pressurizer pressure greater than 1750 psia. This requirement is in agreement with and complements the ECCS

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Specification 3.5.2. The second requirement (3.1.2.2.2) is unchanged from the previous Specification 3.1.2.2 and is applicable in Modes 4 and 3 with pressurizer pressure less than 1750 psia. This requirement assures at least two boron injection flow paths, one of which can be from the refueling water storage tank.

We have reviewed the bases for these technical specifications and conclude that the proposed changes to Specification 3.1.2.2 are technically correct. They also meet their intended purpose of clarifying the requirements for boration system flow paths and providing consistency between Specifications 3.1.2.2 and 3.5.2.

However, during our review it was recognized that the proposed change would necessitate an additional administrative change to Specification 3.1.2.6, Boric Acid Pumps - Operating. This Specification contains a reference to Specification 3.1.2.2.a which will have to be changed to reference Specifications 3.1.2.2.1 and 3.1.2.2.2.a. This additional administrative change to Specification 3.1.2.6 was discussed with and agreed to by appropriate NNECO representatives.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date:

Principal Contributors:

Walter Rekito, Region I

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

OCT 7 1983

MEMORANDUM FOR: Patricia M. Kreutzer, Licensing Assistant
Operating Reactors Branch #3, DL

FROM: James R. Miller, Chief
Operating Reactors Branch #3, DL

SUBJECT: REQUEST FOR PUBLICATION IN MONTHLY FR NOTICE - NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Northeast Nuclear Energy Company, et al. Docket No. 50-336, Millstone Nuclear Power Station Unit No. 2, Town of Waterford, Connecticut

Date of application for amendment: September 24, 1982

Brief description of amendment: This amendment modified Technical Specification 3.1.2.2 to be consistent with TS 3.5.2 requirements that boric acid tanks and corresponding facility dependent flow paths are operable in the modes in which operability is required for ECCS considerations.

Date of issuance October 11, 1983

Effective date: October 11, 1983

Amendment No. 88

Facility Operating License No. DPR-65 . Amendment revised the Technical Specifications.

Date of initial notice in Federal Register: July 20, 1983 (48 FR 33076 at 33083)

The Commission's related evaluation of the amendment is contained in a Safety Evaluation dated October 7, 1983

No significant hazards consideration comments received: No.

Local Public Document Room location: Waterford Public Library, Rope Ferry Road Waterford, Connecticut.

James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing

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cc: P. Leech
P. Kreutzer