August 8, 1981

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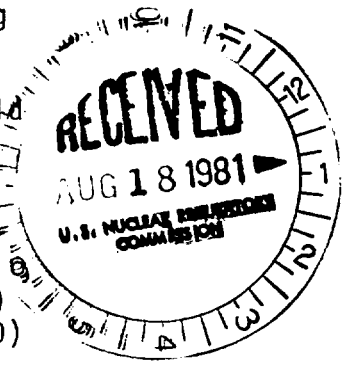

Docket No. 50-245
LS05-81-08-025

Mr. W. G. Counsil, Vice President
Nuclear Engineering and Operations
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, Connecticut 06101

Dear Mr. Counsil:

The Commission has issued the enclosed Amendment No. 77 to Provisional Operating License No. DPR-21 for the Millstone Nuclear Power Station Unit No. 1. This amendment is in response to two of the requests included with your letter dated September 9, 1980. Most of the other changes that you have requested have already been approved (Amendment Nos. 73 and 76 dated March 11 and April 16, 1981.)

The amendment approves Appendix A Technical Specification changes related to (1) instrument functional and test calibration frequency for steam line low pressure and reactor building exhaust vent and refueling floor radiation monitors and (2) personnel air-lock door leak tests. Part of the changes related to personnel air-lock door low pressure leak tests were included prematively (not identified by a vertical line in the margin) with other Appendix J Technical Specifications authorized by Amendment No. 74.

Copies of our Safety Evaluation and the Notice of Issuance are enclosed.

Sincerely,

/S/

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosures:
1. Amendment No. 77 to License No. DPR-21
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

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STS 7/31/81
R. Bottinger Concurred Reg notice (but typo should be corrected) and License Amendment. mwr

OFFICE	DL: ORB #5	DL: ORB #5	OELD mwr	DL: ORB #5	DL: AD/ORB		
SURNAME	HSmith:cc	JShea	M. Rothschild	DCrutchfield	GLainas for		
DATE	7/31/81	7/31/81	08/06/81	8/7/81	8/7/81		

NRC FORM 318 (10/80) NRCM 0240 OFFICIAL RECORD COPY ☆ USGPO: 1980—329-824

cc w/enclosures:
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Day, Berry & Howard
Counselors at Law
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Hartford, Connecticut 06103

Natural Resources Defense Council
917 15th Street, N. W.
Washington, D. C. 20005

Northeast Nuclear Energy Company
ATTN: Superintendent
Millstone Plant
P. O. Box 128
Waterford, Connecticut 06385

Mr. James R. Himmelwright
Northeast Utilities Service Company
P. O. Box 270
Hartford, Connecticut 06101

Resident Inspector
c/o U. S. NRC
P. O. Box Drawer KK
Niantic, Connecticut 06357

Waterford Public Library
Rope Ferry Road, Route 156
Waterford, Connecticut 06385

First Selectman of the Town
of Waterford
Hall of Records
200 Boston Post Road
Waterford, Connecticut 06385

John F. Opeka
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U. S. Environmental Protection Agency
Region I Office
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JFK Federal Building
Boston, Massachusetts 02203

Connecticut Energy Agency
ATTN: Assistant Director
Research and Policy
Development
Department of Planning and
Energy Policy
20 Grand Street
Hartford, Connecticut 06106

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

THE CONNECTICUT LIGHT AND POWER COMPANY,
THE HARTFORD ELECTRIC LIGHT COMPANY,
WESTERN MASSACHUSETTS ELECTRIC COMPANY, AND
NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO. 50-245

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 77
License No. DPR-21

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

   A. The application for amendment by the Connecticut Light and Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company, and Northeast Nuclear Energy Company (the licensees) dated September 9, 1980, 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 3.B of Provisional Operating License No. DPR-21 is hereby amended to read as follows:

   3.B Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 77 , are hereby incorporated in the license. Northeast Nuclear Energy Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 8, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 77

PROVISIONAL OPERATING LICENSE NO. DPR-21

DOCKET NO. 50-245

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

Pages
3/4 2-6
3/4 2-7
3/4 7-8
B3/4 7-9

TABLE 4.2.1

MINIMUM TEST AND CALIBRATION FREQUENCY FOR CORE COOLING INSTRUMENTATION, ROD BLOCKS AND ISOLATIONS

Instrument Channel	Instrument Functional Test (2)	Calibration (2)	Instrument Check (2)
ECCS Instrumentation			
1. Reactor Low-Low Water Level	(1)	Once/3 Months	-
2. Drywell High Pressure	(1)	Once/3 Months	-
3. Reactor Low Pressure (Pump Start)	(1)	Once/3 Months	-
4. Reactor Low Pressure (Valve Permissive)	(1)	Once/3 Months	-
5. APR LP Core Cooling Pump Interlock	(1)	Once/3 Months	-
6. Containment Spray Interlock	(1)	Once/3 Months	-
7. Loss of Normal Power Relays	Refueling Outage	None	-
8. Power Available Relays	(1) (5)	None	-
9. Reactor High Pressure		Once/3 Months	-
Rod Blocks			
1. APRM Downscale	(1) (3)	Once/3 Months	(1)
2. APRM Flow Variable	(1) (3)	Once/3 Months	(1)
3. IRM Upscale	(6)	(6)	(6)
4. IRM Downscale	(6)	(6)	(6)
5. RBM Upscale	(1) (3)	Once/3 Months	(1)
6. RBM Downscale	(1) (3)	Once/3 Months	(1)
7. SRM Upscale	(6)	(6)	(6)
8. SRM Detector not in Startup Position	(6)	(6)	(6)
Main Steam Line Isolation			
1. Steam Tunnel High Temperature	Refueling Outage	Refueling Outage	-
2. Steam Line High Flow	(1)	Once/3 Months	Once/Day
3. Steam Line Low Pressure	(1)	Once/3 Months	None
4. Steam Line High Radiation	(1) (3)	Once/3 Months (4)	Once/Day

Amendment No. ~~34~~, ~~67~~, 77

TABLE 4.2.1 (continued)

MINIMUM TEST AND CALIBRATION FREQUENCY FOR CORE COOLING INSTRUMENTATION, ROD BLOCKS AND ISOLATIONS

Instrument Channel	Instrument Functional Test (2)	Calibration (2)	Instrument Check (2)
Isolation Condenser Isolation			
1. Steam Line High Flow	(1)	Once/3 Months	(1)
2. Condensate Line High Flow	(1)	Once/3 Months	(1)
Reactor Building Ventilation and Standby Gas Treatment System Initiation			
1. Ventilation Exhaust Duct and Refueling Floor Radiation Monitors	(1) (3)	Once/3 Months	Once/Day
Air Ejector Off-Gas Isolation			
1. Radiation Monitors	(1) (3)	Once/3 Months (4)	Once/Day

Notes:

1) Initially once per month until exposure hours (M as defined on Figure 4.1.1) is 2.0×10^5, thereafter according to Figure 4.1.1 with an interval not less than one month nor more than three months. Millstone will use data compiled by Commonwealth Edison on the Dresden 2 Unit in addition to Millstone Unit 1 data.

2) Functional test calibrations and instrument checks are not required when these instruments are not required to be operable or are tripped.

3) This instrumentation is excepted from the functional test definition. The functional test will consist of injecting a simulated electrical signal into the measurement channel. See Note 4.

4) These instrument channels will be calibrated using simulated electrical signals once every three months. In addition calibration including the sensors will be performed during each refueling outage.

5) The individual power available on emergency bus relays will be functionally tested at the frequency specified by (1) above. A full functional test including the actuation of the permissives will be performed every refueling outage.

6) This instrumentation is excepted from the functional test definition. The functional test will consist of injecting a simulated electrical signal into the measurement channel. Functional tests shall be performed before each startup with a required frequency not to exceed once per week. Calibrations including the sensors will be performed during each refueling outage. Instrument checks shall be performed at least once per day during those periods when the instruments are required to be operable.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
	e. Local Leak Rate Tests (LLRT) (1) Primary containment testable pentrations and isolation valves shall be tested at a pressure of 43 psig except the main steam line isolatior valves shall be tested at a pressure of 25 psig each operating cycle. Bolted double-gasketed seals shall be tested whenever the seal is closed after being opened and at least once during each operating cycle. (2) Personnel air lock door seals shall be tested at a pressure of 43 psig at least once every 6 months. If the airlock is opened when primary containment integrity is required during the interval between the above tests, the air lock door seals shall be tested at 10 psig within 72 hours of the first of a series of opening. f. Acceptance criteria and corrective action for LLRT: If the total leakage rates listed below are exceeded, repairs and retests shall be performed to correct the condition. (1) (a) A combined leakage rate of $\leq$ 0.60 L_p for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests when pressurized to P_p. (b) Any one penetration or isolation valve except main steam isolation valves 5% L_{to} (43).

The penetration and air purge piping leakage test frequency, along with the containment leak tests, is adequate to allow detection of leakage trends. Whenever a double-gasketed penetration (primary containment head equipment hatches and the suppression chamber access hatch) is broken and remade, the space between the gaskets is pressurized to determine that the seals are performing properly. The test pressure of 43 psig is consistent with the accident analyses and the maximum preoperational leak rate test pressure. It is expected that the majority of the leakage from valves, penetrations and seals would be into the reactor building. However, it is possible that leakage into other parts of the facility could occur. Such leakage paths that may affect significantly the consequences of accidents are to be minimized.

The results of the loss-of-coolant accident analyses presented in Amendment No. 17 of Dresden Unit 2 (Docket No. 50-237) indicate that fission products would not be released directly to the environs because of leakage from the main steam line isolation valves due to holdup in the steam system complex. Although this affect would indicate that an adequate margin exists with regard to the release of fission products, a program will be undertaken to further reduce the potential for such leakage to bypass the standby gas treatment system.

Monitoring the nitrogen makeup requirements of the inerting system provides a method of observing leak rate trends and would detect gross leaks in a very short time. This equipment must be periodically removed from service for test and maintenance, but this out-of-service time will be kept to a practical minimum.

Surveillance of the suppression chamber-drywell vacuum breakers consists of operability checks, calibration of instrumentation and inspection of the valves.

The monthly operability tests are performed to check the capability for the disc to open and close and to functionally test the position indication system. This test frequency is justified based on previous experience and the fact that these valves are normally closed and are only open during tests or accident conditions.

The refueling outage surveillance tests are performed to check that the valve will perform properly during the accident condition and to verify the calibration of the position indication system. Measuring the force required to lift the valve assures that the valve will function properly during an accident. Inspection of a select number of valves during each refueling outage assures that deterioration of the valve internals or misalignment of the disc does not impair the proper operation of the valve. This test interval is based on equipment quality and previous equipment experience.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 77 TO PROVISIONAL OPERATING LICENSE NO. DPR-21

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-245

1.0 INTRODUCTION

By letter dated September 9, 1980, Northeast Nuclear Energy Company (NNECO) (the licensee) proposed Technical Specification changes to (1) test and calibration frequency for core cooling instruments and (2) personnel air-lock door leak tests.

The first proposal would (1) eliminate functional tests using a simulated electrical signal and increase frequency of calibration to three-month intervals for Main Steam Line Isolation Low Pressure instruments and (2) add the requirement for functional tests of the Ventilation Exhaust Duct and Refueling Floor Radiation Monitors using an electrical signal rather than a radiation source.

The second proposal would revise the test pressure and frequency for performing the Air-Lock Door Local Leak Rate Test.

2.0 EVALUATION

2.1 Test and Calibration frequency for core cooling instruments

The licensee has reported that the pressure switches are accessible during operation and are calibration-checked each time the monthly system functional test is performed. The licensee also reports that radiation monitors have a built in test current source that is adequate to functionally test the channel. As a result of this procedure, the licensee concludes that it is not reasonable to use a radiation source, with its inherent radiation exposure to personnel handling the source material, to functionally test the channel each month. It has also been noted that the proposed changes are consistent with the BWR Standard Technical Specifications (STS). We have determined that the proposed changes, provide an acceptable test scheme, are consistent with requirements at

other BWRs and in conformance with the STS. We therefore, conclude that the changes, as proposed by the licensee, should be approved. Accordingly, the instrument test and calibration requirements of Technical Specification Table 4.2.1 for "Steam Line Low Pressure" and "Ventilation Exhaust Duct and Refueling Floor Radiation Monitors" should be changed as shown in proposed changes on pages 3/4 2-6 and 2-7 of the Appendix A Technical Specifications.

2.2 Personnel Air-Lock Door Leak Test

The licensee has stated that the change is in agreement with the 10 CFR 50, Appendix J requirements, as documented in the NRC letter to NNECO dated March 3, 1977. Our evaluation of the air-lock testing requirements for all BWRs is continuing. However, we have concluded that the proposed changes that (1) increase the required air-lock door seal test pressure from 10 to 43 psig at least once every 6 months in place of 10 psig during each operating cycle and (2) require 10 psig air-lock door seal tests within 72 hours of the first opening of a series of openings when containment integrity is required where no testing was previously required should be made. We have concluded that the new testing requirements provide increased assurance that containment integrity would be maintained during postulated design basis events that cause containment pressurization. Accordingly, the changes as proposed by the licensee on Technical Specification pages 3/4 7-8 and B3/4 7-9 should be made. It should be noted that our conclusion with respect to Air-Lock Door Seal Tests is consistent with the NRC letter, Brunner to Counsil, dated September 21, 1979. The proposed change to Technical Specification page 3/4 7-8 was made unintentionally coincident with the authorized changes of Amendment 74. The placement of the vertical line in the margin at this time identifies the change and signifies approval.

3.0 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.

4.0 CONCLUSION

We have concluded, based upon the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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: August 8, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-245

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL

NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 77 to Provisional Operating License No. DPR-21, issued to The Connecticut Light and Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company, and Northeast Nuclear Energy Company (the licensees), which revised the Technical Specifications for operation of the Millstone Nuclear Power Station, Unit 1 (the facility), located in the Town of Waterford, Connecticut. The amendment is effective as of its date of issuance.

The amendment approves Appendix A Technical Specification changes related to (1) instrument functional and test calibration frequency for steam line low pressure and reactor building exhaust vent and refueling floor radiation monitors and (2) personnel air-lock door leak tests.

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. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment, dated September 9, 1980, (2) Amendment No. 77 to License No. DPR-21, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street N. W., Washington, D. C. 20555 and at the Waterford Public Library, Rope Ferry Road, Route 156, Waterford, Connecticut. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this eighth day of August, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis M. Crutchfield

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing