

April 21, 1978

Dockets Nos.: 50-245
and 50-336 ✓

Northeast Nuclear Energy Company
ATTN: Mr. Donald C. Switzer
President
P. O. Box 270
Hartford, Connecticut 06101

Gentlemen:

The Commission has issued the enclosed Amendment No. 48 to Provisional Operating License No. DPR-21 and Amendment No. 40 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Units Nos. 1 and 2. The amendments are in accordance with your application dated February 17, 1978.

These amendments consist of changes to the common Appendix B (Environmental) Technical Specifications (ETS) for both units. The changes incorporate into the ETS restrictions on the radioactive waste effluent which could potentially be discharged from the condensate polishing waste neutralizing sumps into the Long Island Sound.

The specifications require that discharges from the waste neutralizing sump be discontinued following alarm of either the steam generator or steam jet air ejector (SJAE) radiation monitor. Also, monitoring of sump contents is required prior to discharge whenever the steam generator gross activity exceeds 1×10^{-7} $\mu\text{Ci/ml}$. Releases from the sumps are permitted after adequate sampling and analysis provided conformance with the radioactive release limits of Specification 2.4.1.2 are met.

We evaluated these changes to the Technical Specifications and found them acceptable. The termination of sump discharge following an alarm of either the steam generator or SJAE monitor assures that during periods of primary to secondary system leaks, the releases of radioactivity via the condensate polishing waste neutralizing sumps will be monitored and controlled. Also the monitoring requirements on sump contents whenever the steam generator gross activity exceeds 1×10^{-7} $\mu\text{Ci/ml}$ provides added assurance that all potential releases of radioactivity will be monitored and controlled within the regulating requirements of 10 CFR Parts 20 and 50 and the Millstone Technical Specifications.

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We have determined that the amendments do 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 amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5(d)(4), that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

We have concluded, based on the considerations above, that the amendments do not involve a significant increase in the probability or consequences of accidents previously considered, do not involve a significant decrease in a safety margin, and therefore do not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of the related Notice of Issuance is also enclosed.

Sincerely,

 Signed by

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosures:

1. Amendment No. ⁴⁸ to DPR-21
2. Amendment No. ⁴⁰ to DPR-65
3. Notice

cc w/enclosures: See next page

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Northeast Nuclear Energy Company

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cc: William H. Cuddy, Esquire
Day, Berry & Howard
Counselors At Law
One Constitution Plaza
Hartford, Connecticut 06103

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

Mr. Albert L. Partridge, First Selectman
Town of Waterford
Hall of Records - 200 Boston Post Road
Waterford, Connecticut 06385

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

Chief, Energy Systems Analysis Branch (AW-459)
Office of Radiation Programs
U. S. Environmental Protection Agency
Room 645, East Tower
401 M Street, N. W.
Washington, D. C. 20460

U. S. Environmental Protection Agency
Region I Office
ATTN: EIS COORDINATOR
John F. Kennedy Federal Building
Boston, Massachusetts 02203

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

cc w/enclosures & incoming dtd:
2/17/78
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

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

DOCKET NO. 50-245

MILLSTONE NUCLEAR POWER STATION UNIT NO. 1
AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 48
License No. DPR-21

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Connecticut Light and Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company, Northeast Nuclear Energy Company (the licensees) dated February 17, 1978, 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.

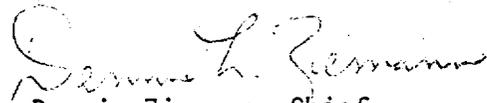
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B. of Provisional Operating License No. DPR-21 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 48, are hereby incorporated in the license. The licensees 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 Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 21, 1978



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. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 40
License No. DPR-65

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 February 17, 1978, 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.

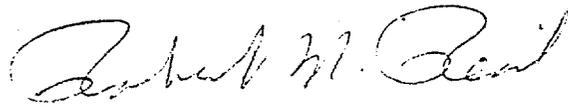
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 40, are hereby incorporated in the license. The licensees 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



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 21, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 48 TO
PROVISIONAL OPERATING LICENSE NO. DPR-21, AND
AMENDMENT NO. 40 TO FACILITY OPERATING LICENSE NO. DPR-65
DOCKETS NOS. 50-245 AND 50-336

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

Pages

2.4-2

2.4-5

2.4-15

2.4-16

2.4-20

Unit 1 Floor Drain Sample Tanks
Waste Collector Sample Tanks
Decontamination Solution Tank
Waste Surge Tank

Unit 2 Aerated Waste Monitor Tank
Coolant Waste Monitor Tank
Condensate Polishing Waste Neutralizing Sumps

- H. The operability of each automatic isolation valve in the liquid radwaste discharge line shall be demonstrated quarterly.
- I. If limiting conditions in 2.4.1.2.A through 2.3.1.2.H above are exceeded, plant operations shall be modified as required to restore compliance with these specifications. Prompt reporting requirements for exceeding these limiting conditions for operation are detailed in Section 5.6.2.a.(1).

2.4.1.3 Monitoring Requirements

- A. Prior to release of each batch of liquid waste, a sample shall be taken from that batch and analyzed for the concentration of each significant gamma energy peak in accordance with Table 2.4-1 to demonstrate compliance with Specification 2.4.1.1 using the flow rate of the stream into which the waste is discharged during the period of discharge.
- B. Sampling and analysis of liquid radioactive waste shall be performed in accordance with Table 2.4-1. Prior to taking samples from a monitoring tank or sump, at least two tank/sump volumes shall be recirculated or equivalent mixing provided.
- C. The radioactivity in liquid wastes shall be continuously monitored and recorded during release. Whenever these monitors are inoperable for a period not to exceed 72 hours, two independent samples of each tank to be discharged shall be analyzed and two plant personnel shall independently check valving prior to the discharge. If these monitors are inoperable for a period exceeding 72 hours, no liquid waste tank shall be released and any release in progress shall be terminated.
- D. The flow rate of liquid radioactive waste shall be continuously measured and recorded during release. Whenever this monitor is inoperable for a period not to exceed 72 hours, manual logging at intervals not to exceed one (1) hour will allow continued discharge. If these monitors are inoperable for a period exceeding 72 hours, no liquid waste tank shall be released and any release in progress shall be terminated.
- E. All liquid effluent radiation monitors shall be calibrated at least quarterly by means of a radioactive source which has been calibrated to a National Bureau of Standards source. Each monitor shall also have a channel functional test monthly and channel instrument check prior to making a release.

In addition to these limiting conditions for operation, the reporting requirements of Specification 2.4.1.2.C delineate that the licensee shall identify the cause whenever the cumulative release of radioactive materials in liquid wastes exceed one-half the design objective annual quantity during any calendar quarter and describe the proposed program of action to reduce such releases to design objective levels on a timely basis. This report must be filed within 30 days following the calendar quarter in which the release occurred.

The monitoring requirements given under Specification 2.4.1.3 provide assurance that radioactive materials in liquid wastes are properly controlled and monitored in conformance with the requirements of Design Criteria 60 and 64. These requirements provide the data for the licensee and the Commission to evaluate the plant's performance relative to radioactive liquid wastes released to the environment. Reports on the quantities of radioactive materials released in liquid wastes are furnished to the Commission according to Section 5.6.1 of these Technical Specifications in conformance with Regulatory Guide 1.21. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may, from time to time, require the licensee to take such action as the Commission deems appropriate.

Monitoring Requirements 2.4.1.3 A through E and G and H will apply to the Condensate Polishing Waste Neutralizing Sump discharges only when the steam generator gross activity exceeds 1×10^{-7} uCi/ml. Discharges from these sumps will be terminated when the Steam Generator or the S.J.A.E. Radiation Monitors alarm, until Monitoring Requirements 2.4.1.3A through E and G and H are met.

The points of release to the environment to be monitored in Section 2.4.1 include all the monitored release points as provided for in Table 2.4-3.

Table 2.4-1

RADIOACTIVE LIQUID SAMPLING AND ANALYSIS

Liquid Source	Sampling Frequency	Type of Activity Analysis	Detectable Concentrations ($\mu\text{Ci/ml}$) (3)
A. Monitor Tank Releases and/or Condensate Polishing Waste Neutralizing Sump Releases (7)	Each Batch	Principal Gamma Emitters	5×10^{-7} (2)
	One Batch/Month	Dissolved Gases	10^{-5}
	Weekly Composite (1)	Ba-La-140, I-131	10^{-6}
		Sr-89	5×10^{-8}
	Monthly Composite (1)	H-3	10^{-5}
		Gross Alpha	10^{-7}
	Quarterly Composite (1)	Sr-90	5×10^{-8}
B. Primary Coolant	Weekly (4)	I-131, I-133	10^{-6}
C. Steam Generator Blowdown (Unit 2 Only)	Weekly (6)	Principal Gamma Emitters	5×10^{-7} (2)
		Ba-La-140, I-131	10^{-6}
	One Sample/Month (6)	Dissolved Gases	10^{-5}
		Sr-89	5×10^{-8}
	Monthly Composite (5)	H-3	10^{-5}
		Gross alpha	10^{-7}
Quarterly Composite (5)	Sr-90	5×10^{-8}	

DPR-21:Amendment No. 30, 48
DPR-65:Amendment No. 14, 40

Table 2.4-1 (Continued)

- (1) A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged.
- (2) For certain mixtures of gamma emitters, it may not be possible to measure radionuclides in concentrations near their sensitivity limits when other nuclides are present in the sample in much greater concentrations. Under these circumstances, it will be more appropriate to calculate the concentrations of such radionuclides using measured ratios with those radionuclides which are routinely identified and measured.
- (3) The detectability limits for activity analysis are based on the technical feasibility and on the potential significance in the environment of the quantities released. For some nuclides, lower detection limits may be readily achievable and when nuclides are measured below the stated limits, they shall also be reported.
- (4) The power level and cleanup or purification flow rate at the sample time shall also be reported.
- (5) To be representative of the average quantities and concentrations of radioactive materials in liquid effluents, samples should be collected in proportion to the rate of flow of the effluent stream. Prior to analyses, all samples taken for the composite should be thoroughly mixed in order for the composite sample to be representative of the average effluent release.
- (6) These analyses are required when the steam generator gross activity (sampled and analyzed 3 times per week as per the Safety Technical Specifications Table 4.7-2) exceeds $1 \times 10^{-7} \mu \text{ Ci/ml}$.
- (7) Sampling and analysis of the Condensate Polishing Waste Neutralizing Sumps, for the activity analysis shown in Table 2.4-1, are required only when the steam generator gross activity exceeds $1 \times 10^{-7} \text{ uCi/ml}$.

Table 2.4-3 (Continued)

UNIT 2, PWR-LIQUID WASTE SYSTEM
LOCATION OF PROCESS AND EFFLUENT MONITORS AND SAMPLERS REQUIRED BY TECHNICAL SPECIFICATIONS

<u>Process Stream or Release Point</u>	<u>Process Radiation Alarms</u>	<u>Auto Control to Isolation Valve</u>	<u>Continuous Radiation Monitor</u>	<u>Grab Sample Station</u>	<u>Analysis Capabilities**</u>					<u>High Tank Level Alarm</u>	
					<u>Gross Activity</u>	<u>I</u>	<u>Dissolved Gases</u>	<u>Alpha</u>	<u>H-3</u>		<u>Isotopic Analysis</u>
Miscellaneous Waste Sample (Test) Tank				X		X	X	X	X	X	X
Primary Coolant System				X		X					
Liquid Radwaste Discharge Pipe	X	X	X		X						
Steam Generator Blowdown System	X		X	X	X	X	X	X	X	X	
Service Water Discharge Pipe				X	X	X	X	X	X	X	
Outdoor Storage Tanks* - (Potentially Contaminated)				X		X	X	X	X	X	X
Nuclear Closed Cooling System	X		X		X						
Turbine Building Sumps (Floor Drains)				X	X	X	X	X	X	X	X
Condensate Polishing Waste Neutralizing Sumps	X	X	X		X						

* Includes only the refuel water storage tank

** These columns indicate the analysis capabilities required for each process stream or release point. Table 2.4.1 indicates the sampling analysis requirements.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKETS NOS. 50-245 AND 50-336NORTHEAST NUCLEAR ENERGY COMPANY,
THE CONNECTICUT LIGHT AND POWER COMPANY,
THE HARTFORD ELECTRIC LIGHT COMPANY, AND
WESTERN MASSACHUSETTS ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO OPERATING
LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 48 to Provisional Operating License No. DPR-21 and Amendment No. 40 to Facility Operating License No. DPR-65 to Northeast Nuclear Energy Company, The Connecticut Light and Power Company, The Hartford Electric Light Company, and Western Massachusetts Electric Company, which revised Technical Specifications for operation of the Millstone Nuclear Power Station, Units Nos. 1 and 2, located in the Town of Waterford, Connecticut. The amendments are effective as of their date of issuance.

These amendments modify the Environmental Technical Specifications to incorporate restrictions on the radioactive waste effluent which could potentially be discharged from the condensate polishing waste neutralizing sumps into the Long Island Sound.

The application for the amendments 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 amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

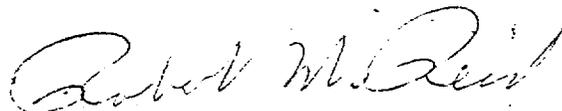
- 2 -

The Commission has determined that the issuance of these amendments 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 these amendments.

For further details with respect to this action, see (1) the application for amendments dated February 17, 1978, (2) Amendments Nos. 48 and 40 to Licenses Nos. DPR-21 and DPR-65, respectively, and (3) the Commission's letter transmitting these amendments. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. 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 Operating Reactors.

Dated at Bethesda, Maryland, this 21st day of April 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors