

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 23, 1998

Mr. Martin L. Bowling Recovery Officer - Millstone Unit 2 Northeast Nuclear Energy Company c/o Ms. Patricia A. Loftus Director - Regulatory Affairs P.O. Box 128 Waterford, CT 06385

## SUBJECT: ISSUANCE OF AMENDMENT RELATING TO THE EMERGENCY DIESEL GENERATORS AS DESCRIBED IN THE UPDATED FINAL SAFETY ANALYSIS REPORT FOR THE MILLSTONE NUCLEAR POWER STATION, UNIT 2 (TAC NO. M99534)

Dear Mr. Bowling:

The Commission has issued the enclosed Amendment No. 212 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit 2, in response to your application dated September 3, 1997.

The amendment authorizes Northeast Nuclear Energy Company, through a license condition, to incorporate changes to the description of the facility in the Updated Final Safety Analysis Report (UFSAR) as detailed in the enclosed Safety Evaluation. This change revises the UFSAR by modifying the operation of the onsite emergency diesel generators and their associated fuel oil supplies.

The Commission has amended the license to include an Appendix B, which is a list of additional license conditions. This is an administrative action by the NRC that only involves the format of the license and does not authorize any activities outside the scope of the September 3, 1997, application. Approval of this amendment through a license condition was discussed with your staff in a conference call on December 9, 1997, and your staff agreed to the structure of the license for issuing the license condition.

NRG FILF GENTER COPY

LUCION

Martin L. Bowling

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly <u>Federal Register</u> notice.

Sincerely,

Daniel G. McDonald Jr., Sr. Project Manager Special Projects Office - Licensing Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures:

- 1. Amendment No. 212 to DPR-65
- 2. Safety Evaluation

cc w/enclosures: See next page

Martin L. Bowling

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly <u>Federal Register</u> notice.

Sincerely,

Original signed by:

Daniel G. McDonald Jr., Sr. Project Manager Special Projects Office - Licensing Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 212 to DPR-65

2. Safety Evaluation

cc w/encls: See next page

**DISTRIBUTION:** Docket File PUBLIC SPO-L Reading SPO Reading WTravers **PMcKee** LBerry DMcDonald DShum THarris (e-mail SE only) OGC GHill (2) WBeckner ACRS JDurr, RI

#### DOCUMENT NAME: G:\MCDONALD\M99534.AMD

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	SPO-L:PM	SPO-L:LA	UNIC I	SPLB Viac	F OGO	CA/3 M	SPQ-141	) b
NAME	DMcDonald	LBerry	Vap .	LMarsh 774	bai		PMcKee	
DATE	01/07/98	$\left[ \right]$	/98	119 198	3)/	14 198	1'123/	/98
			A			1		

OFFICIAL RECORD COPY

#### Northeast Nuclear Energy Company

CC:

Lillian M. Cuoco, Esquire Senior Nuclear Counsel Northeast Utilities Service Company P. O. Box 270 Hartford, CT 06141-0270

Mr. Kevin T. A. McCarthy, Director Monitoring and Radiation Division Department of Environmental Protection 79 Elm Street Hartford, CT 06106-5127

Regional Administrator, Region I U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406

First Selectmen Town of Waterford Hall of Records 200 Boston Post Road Waterford, CT 06385

Mr. Wayne D. Lanning Deputy Director of Inspections Special Projects Office 475 Allendale Road King of Prussia, PA 19406-1415

Michael H. Brothers Vice President - Operations Northeast Nuclear Energy Company P. O. Box 128 Waterford, CT 06385

Mr. M. R. Scully, Executive Director Connecticut Municipal Electric Energy Cooperative 30 Stott Avenue Norwich, CT 06360

Mr. David Amerine Vice President - Nuclear Engineering and Support Northeast Utilities Service Company P. O. Box 128 Waterford, CT 06385 Millstone Nuclear Power Station Unit 3

> Mr. William D. Meinert Nuclear Engineer Massachusetts Municipal Wholesale Electric Company P. O. Box 426 Ludlow, MA 01056

Joseph R. Egan, Esquire Egan & Associates, P.C. 2300 N Street, NW Washington, D.C. 20037

Mr. F. C. Rothen Vice President -Work Services Northeast Utilities Service Company P. O. Box 128 Waterford, CT 06385

Ernest C. Hadley, Esquire 1040 B Main Street P. O. Box 549 West Wareham, MA 02576

Mr. John Buckingham Department of Public Utility Control Electric Unit 10 Liberty Square New Britain, CT 06051

Mr. James S. Robinson Manager, Nuclear Investments and Administration New England Power Company 25 Research Drive Westborough, MA 01582

Mr. D. M. Goebel Vice President - Nuclear Oversight Northeast Utilities Service Company P.O. Box 128 Waterford, CT 06385

Deborah Katz, President Citizens Awareness Network P.O. Box 83 Shelburne Falls, MA 03170

#### Northeast Nuclear Energy Company

CC:

Senior Resident Inspector Millstone Nuclear Power Station c/o U.S. Nuclear Regulatory Commission P. O. Box 513 Niantic, CT 06357

Mr. Allan Johanson, Assistant Director Office of Policy and Management Policy Development and Planning Division 450 Capitol Avenue - MS# 52ERN P. O. Box 341441 Hartford, CT 06134-1441

Citizens Regulatory Commission ATTN: Ms. Susan Perry Luxton 180 Great Neck Road Waterford, CT 06385

The Honorable Terry Concannon Co-Chair Nuclear Energy Advisory Council Room 4035 Legislative Office Building Capitol Avenue Hartford, CT 06106

Mr. Evan W. Woollacott Co-Chair Nuclear Energy Advisory Council 128 Terry's Plain Road Simsbury, CT 06070

Little Harbor Consultants, Inc. Millstone - ITPOP Project Office P. O. Box 0630 Niantic, CT 06357-0630

Mr. B. D. Kenyon Chief Nuclear Officer - Millstone Northeast Nuclear Energy Company P. O. Box 128 Waterford, CT 06385 Millstone Nuclear Power Station Unit 3

> Mr. Daniel L. Curry Project Director Parsons Power Group Inc. 2675 Morgantown Road Reading, PA 19607

Mr. Don Schopfer Verification Team Manager Sargent & Lundy 55 E. Monroe Street Chicago, IL 60603

Mr. J. P. McElwain Vice President (Acting) - Millstone 3 Northeast Nuclear Energy Company P.O. Box 128 Waterford, CT 06385

Mr. G. D. Hicks Unit Director - Millstone Unit 3 Northeast Nuclear Energy Company P.O. Box 128 Waterford, CT 06385



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

## NORTHEAST NUCLEAR ENERGY COMPANY

# THE CONNECTICUT LIGHT AND POWER COMPANY

## AND WESTERN MASSACHUSETTS ELECTRIC COMPANY

## DOCKET NO. 50-336

## MILLSTONE NUCLEAR POWER STATION, UNIT 2

## AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 212 License No. DPR-65

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by Northeast Nuclear Energy Company, et al. (the licensees) dated September 3, 1997, 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.



- Accordingly, the license is amended to authorize changes to the Updated Final Safety Analysis Report and add paragraph 2.C.(5) to Facility Operating License No. DPR-65 as follows:
  - (5) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 212, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the additional conditions.

3. The license amendment is effective as of its date of issuance to be implemented within 30 days from the date of its issuance. Implementation of the amendment is the incorporation in the Updated Final Safety Analysis Report of the changes to the description of the facility as described in Attachment 3 of the licensee's application dated September 3, 1997, and the staff's Safety Evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

Phillip F. McKee Deputy Director for Licensing Special Projects Office Office of Nuclear Reactor Regulation

Attachments:

1. Pages 4 and 5 of the license<sup>1</sup>

2. Appendix B - Additional Conditions

Date of Issuance: January 23, 1998

<sup>1</sup> Pages 4 and 5 are attached as a convenience for the composite license to reflect this change.

#### (3) Fire Protection

The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report and as approved in the SER dated September 19, 1978, and supplements dated October 21, 1980, November 11, 1981, October 31, 1985, April 15, 1986, January 15, 1987, April 29, 1988, July 17, 1990, and November 3, 1995, subject to the following provisions.

The licensee may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

#### (4) <u>Physical Protection</u>

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Millstone Nuclear Power Station Physical Security Plan," with revisions submitted through March 29, 1988; "Millstone Nuclear Power Station Suitability, Training and Qualification Plan," with revision submitted through October 30, 1985. Changes made in accordance with 10 CFR 73.55 will be implemented in accordance with the schedule set forth therein.

#### (5) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 212 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the additional conditions.

Amendment No. 43, 75, 107, 129, 191, 212

#### (6) <u>Relocated Technical Specifications</u>

The licensee shall relocate certain technical specification requirements to licensee-controlled documents as described below. The location of these requirements shall be retained by the licensee.

a. This license condition approves the relocation of certain technical specification requirements to licensee-controlled documents (Technical Requirements Manual), as described in the licensee's application dated May 20, 1997, as supplemented on September 23, 1997. The approval is documented in the staff's safety evaluation dated November 19, 1997. This license condition is effective as of its date of issuance by Amendment No. 210 and shall be implemented 90 days from the date of issuance. Implementation shall include the relocation of technical specification requirements to the appropriate licensee-controlled document as identified in the licensee's application dated May 20, 1997, as supplemented on September 23, 1997.

D. This amended license is effective as of its date of issuance and shall expire at midnight, July 31, 2015.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by Roger S. Boyd

Roger S. Boyd, Acting Director Division of Reactor Licensing Office of Nuclear Reactor Regulation

Enclosures:

- 1. Incomplete Preoperational Test
  - Items Which Must be Completed
- 2. Change No. 4 to Technical Specifications Contained in Appendix A to DPR-65
- 3. Appendix B

Date of Issuance: September 26, 1975

Amendment No. 210, 212

## APPENDIX B

# ADDITIONAL CONDITIONS

# FACILITY OPERATING LICENSE NO.DPR-65

Northeast Nuclear Energy Company shall comply with the following conditions on the schedules noted below:

Amendment <u>Number</u>	Additional Conditions	 -
212	This amendment authorizes the licensee to include in the Updated Final Safety Analysis Report (UFSAR) changes to the description of the facility. Implementation of this amendment is the updating of the UFSAR to reflect the changes in Attachment 3 of the licensee's application dated September 3, 1997, and evaluated in the staff's Safety Evaluation dated January 23, 19	998.

30 days from the date of issuance

Implementation Date

Amendment No. 212



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

## SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

# RELATED TO AMENDMENT NO. 212

## TO FACILITY OPERATING LICENSE NO. DPR-65

## NORTHEAST NUCLEAR ENERGY COMPANY

## THE CONNECTICUT LIGHT AND POWER COMPANY

## AND WESTERN MASSACHUSETTS ELECTRIC COMPANY

MILLSTONE NUCLEAR POWER STATION. UNIT 2

DOCKET NO. 50-336

## 1.0 INTRODUCTION

By letter dated September 3, 1997, Northeast Nuclear Energy Company, et al. (the licensee) proposed a license amendment that would allow changes to the description of Millstone Nuclear Power Station, Unit 2, in the Updated Final Safety Analysis Report (UFSAR). The licensee determined that the requested changes constitute an unreviewed safety question as defined in 10 CFR 50.59. The proposed changes would allow the utilization of a nonseismic underground storage tank to provide makeup for the required minimum inventory of fuel oil needed for continuous operation of one onsite emergency diesel generator (EDG) for 7 days and the other onsite EDG for 24 hours following a design basis loss-of-coolant accident (LOCA).

Attachment 3 of the September 3, 1997, letter provided marked up pages of the UFSAR reflecting the proposed changes.

### 2.0 BACKGROUND

There are two EDGs for Millstone Nuclear Power Station, Unit 2 (MNPS-2). Each EDG is provided with a separate fuel oil supply (FOS) system, which consists of a FOS tank and associated piping, valves, and instrumentation controls. Current TSs require a minimum of 12,000 gallons of fuel oil to be stored in each FOS tank (T-48A and T-48B). A cross-tie with two locked-close valves for the FOS tanks is provided so that a total inventory of 24,000 gallons would be available to either one of the EDGs. The FOS system for each EDG including the cross-tie for the FOS tanks is seismic Category I design.

In addition, a 25,000-gallon underground fuel oil storage tank (T-47A), which is common for both EDGs, is provided to receive fuel oil from the delivery trucks prior to placing fuel oil in the FOS tanks. Upon arrival at the site, fuel oil in the delivery truck is sampled and tested for appearance, flash point, and kinematic viscosity in accordance with the MNPS-2 procedure, "Fuel Oil Delivery Sampling Requirements." If test results are acceptable, the delivery truck is

9802230303 9801 00336

off-loaded to T-47A tank. An additional sample from the delivery truck is sent to an offsite laboratory for analysis in accordance with MNPS-2 surveillance procedure, "Diesel Generator Fuel Oil Sampling." After off-loading is complete, T-47A tank is sampled to verify that the combined fuel oil meets the applicable requirements of American Society for Testing and Materials (ASTM) D975. In addition, the tank is sampled once per month for water and color in accordance with MNPS-2 surveillance procedure, "Sampling & Inventory of Diesel Oil Storage Tank, T-47A," and is also sampled every 92 days to verify that the fuel oil meets ASTM D975 requirements.

Normally, fuel oil stored in T-47A tank is transferred by two 25-gpm fuel oil transfer pumps to the FOS tanks. One fuel oil transfer pump supplies fuel oil to one FOS tank. However, there is an inter-connection with a locked-close valve in the transfer pump discharge piping so that each transfer pump can supply fuel oil to either FOS tank T-48A or T-48B. The T-47A tank, the two 25-gpm fuel oil transfer pumps and their associated piping (between the storage tank and the EDG tanks), and valves are nonseismic designed.

During the licensing application for MNPS-2, the combined fuel oil inventory (a minimum of 24,000 gallons) stored in the FOS tanks was determined to be sufficient for one EDG to operate for approximately 7 days plus the other EDG for 1 hour following a LOCA. Thus, the EDG fuel oil inventory for MNPS-2 satisfied the licensee's commitment stated in the FSAR regarding compliance with the Institute of Electrical and Electronic Engineers (IEEE) Std. 308-1971. Therefore, the staff concluded that the EDG fuel oil storage and transfer systems were acceptable in the Safety Evaluation Report, dated May 10, 1974.

In July, 1994, the licensee identified that, due to the original methodology (a best estimate methodology, which predicted a maximum load of 2298 kW) used in the fuel oil consumption rate calculation and increases in the electrical loads on the EDGs since plant startup (from 2298 kW to current 2616 kW), the fuel oil inventory in the combined FOS tanks, as previously detailed, was no longer sufficient for 7 days continuous operation of one EDG plus the other EDG for 1 hour following a LOCA.

New EDG run time calculations were performed assuming that both FOS tanks are at the TS limit of 12,000 gallons. Both EDGs will operate initially at the continuous rated loads of 2750 kW for 24 hours at which time one of the EDGs will be secured and the other EDG will continue operation at its rated load by cross-connecting the two FOS tanks. Results of the calculations indicate that the above cited combined fuel oil stored in the FOS tanks will allow two EDGs to operate for 24 hours and then allow one of the EDGs to continue to operate for a total of approximately 3.5 days. The total volume of fuel oil required for two EDGs to initially operate for 24 hours and then allow one of the EDGs to continue to at its rated load for a total of 7 days is 41,515 gallons.

MNPS-2 emergency plan procedures require an evaluation of the need to order additional fuel from offsite sources within 4 hours following a LOCA or loss of normal power (LNP). The licensee stated that the change to the two EDGs initial operation time from 1 hour to 24 hours will provide sufficient time for manning the Technical Support Center, provide load shedding recommendations, determine the need for additional fuel oil, order any required fuel oil, and monitor the delivery of the fuel oil to the site.

#### 3.0 EVALUATION

.

Normal make-up to the EDG FOS tanks is supplied via T-47A tank. It contains fuel oil which is fully qualified and tested regularly as described above. If a seismic event occurs, the fuel oil in T-47A tank cannot be relied upon; however, replenishment of fuel oil in the FOS tanks could be accomplished directly from delivery trucks via offsite sources. The licensee stated that the requirement of fuel oil (approximately 17,700 gallons) to be stored in T-47A tank will be added to the Technical Requirements Manual and will be verified by a surveillance requirement, which is similar to TS Surveillance Requirement 4.8.1.1.2.a.1 required to verify the EDG fuel oil inventory in tanks T-48A and T-48B. The T-47A tank low level alarm will be set at approximately 92 inches to ensure that a useable volume of 17,700 gallons is maintained in the tank. The associated alarm procedure will provide guidance to restore the required T-47A tank volume.

In addition, as previously noted, the MNPS-2 emergency plan procedures require an evaluation of the need to order additional fuel from offsite sources within 4 hours following a LOCA or LNP and require the Technical Support Center staff to provide load shedding recommendations within 24 hours of a LOCA or LNP. The load shedding recommendations may include securing one EDG, cross connecting the two FOS tanks, and securing any electrical loads not needed to support plant recovery depending on the plant conditions.

The staff concludes, based on its review of the licensee's proposed revision to the UFSAR and the licensee's commitment to the actions described above to ensure the required EDG fuel oil supply inventory, that there will be an adequate and reliable fuel oil inventory for 7 days of continuous EDG operation following a LOCA or LNP at MNPS-2. Therefore, the staff finds the proposed revision to the UFSAR, as described in Attachment 3 of the licensee's submittal, acceptable.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The amendment also relates to changes in record keeping, reporting, or administrative procedures or requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (62 FR 50009 dated September 24, 1997). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 <u>CONCLUSION</u>

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 Contributors: D. Shum D. McDonald

Date: January 23, 1998