



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

THE CONNECTICUT LIGHT AND POWER COMPANY

WESTERN MASSACHUSETTS ELECTRIC COMPANY

AND

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-245

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 102  
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, Western Massachusetts Electric Company and Northeast Nuclear Energy Company (the licensees) dated May 15, 1985, 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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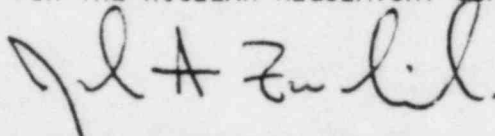
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C(2) of Provisional Operating License No. DPR-21 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B as revised through Amendment No. 102, are hereby incorporated in the license. The 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



John A. Zwolinski, Chief  
Operating Reactors Branch #5  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 5, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 102

PROVISIONAL OPERATING LICENSE NO. DPR-21

DOCKET NO. 50-245

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

REMOVE

3/4 7-3  
3/4 7-4  
3/4 7-12  
B3/4 7-5

INSERT

3/4 7-3\*  
3/4 7-4  
3/4 7-12  
B3/4 7-5

\*Overleaf page provided to maintain document completeness. No changes contained on this page.

# LIMITING CONDITION FOR OPERATION

- d. At least one of the two existing narrow range torus water level monitoring systems shall be operable whenever primary containment is required, except as specified in 3.7.A.1.e.
- e. If the torus water level monitoring system is disabled and cannot be restored in six (6) hours, an orderly shutdown shall be initiated and the reactor shall be in cold shutdown within 24 hours unless the level monitoring system is made operable.

## 2. Drywell to Suppression Chamber Differential Pressure

- a. Differential pressure between the drywell and suppression chamber shall be maintained equal to or greater than 1.0 psid, except as specified below.
  - (1) The differential pressure shall be established within 24 hours of entering the RUN mode, and may be reduced to less than 1.0 psid 24 hours prior to a scheduled shutdown.
  - (2) The differential pressure may be reduced to less than 1.0 psid for a maximum of four (4) hours during required operability testing of the torus/reactor building and drywell/torus vacuum breakers, and during venting and purging of the containment.

# SURVEILLANCE REQUIREMENT

- c. Torus water level instrumentation shall be calibrated once per 6 months if both systems are operable.
- d. Torus water level instrumentation shall be calibrated once per month if only one system is operable.

## 2. Drywell to Suppression Chamber Differential Pressure

- a. The differential pressure between the drywell and suppression chamber shall be recorded once per shift.

# **LIMITING CONDITION FOR OPERATION**

## **6. Oxygen concentration:**

- a. After completion of the startup test program and demonstration of plant electrical output, the primary containment atmosphere shall be reduced to less than 4% oxygen with nitrogen gas whenever the reactor coolant pressure is greater than 90 psig and during reactor power operation except as specified in 3.7.A.6.b or 3.7.A.6.c.
- b. Within the 24-hour period subsequent to placing the reactor in the Run mode following a shutdown, the containment atmosphere oxygen concentration shall be reduced to less than 4% by volume and maintained in this condition. Deinerting may commence 24 hours prior to a shutdown.
- c. Oxygen concentration may be greater than 4% by volume for a period not to exceed 48 hours for purposes of conducting drywell entries relating to testing, surveillances, or maintenance on equipment important to safety.

7. If the specifications of 3.7.A cannot be met, initiate an orderly shutdown and have the reactor in a cold shutdown condition within 24 hours.

# **SURVEILLANCE REQUIREMENT**

## **6. Oxygen concentration:**

Whenever inerting is required, the primary containment oxygen concentration shall be measured and recorded on a weekly basis.



## 6. Oxygen Concentration

The relatively small containment volume inherent in the GE-BWR pressure suppression containment and the large amount of zirconium in the core are such that the occurrence of a very limited (a percent of so) reaction of the zirconium and steam during a loss of coolant accident would lead to the liberation of sufficient hydrogen to result in a flammable concentration in the containment. Subsequent ignition of the hydrogen if it is present in sufficient quantities to result in excessively rapid recombination, could result in a loss of containment integrity.

The 4% oxygen concentration minimizes the possibility of hydrogen combustion following a loss of coolant accident. Significant quantities of hydrogen could be generated if the core cooling systems did not sufficiently cool the core.

The occurrence of primary system leakage following a major refueling outage or other scheduled shutdown is more probable than the occurrence of the loss of coolant accident upon which the specified oxygen concentration limit is based. Permitting access to the drywell for leak inspections during a startup is judged prudent in terms of the added plant safety without significantly reducing the margin of safety. Thus to preclude the possibility of starting the reactor and operating for extended periods of time with significant leaks in the primary system, leak inspections are scheduled during startup periods, when the primary system is at or near rated operating temperature and pressure. The 24 hour period to provide inerting is judged to be sufficient to perform the leak inspection and establish the required oxygen concentration. The primary containment is normally slightly pressurized during periods of reactor operation assuring no air in-leakage through the primary containment. However, at least once a week, the oxygen concentration will be determined as added assurance.

### B. Standby Gas Treatment Systems and

### C. Secondary Containment

The secondary containment is designed to minimize any ground level release of radioactive materials which might result from a serious accident. The reactor building provides secondary containment during reactor operation, when the drywell is sealed and in service; the reactor building provides primary containment when the reactor is shutdown and the drywell is open, as during refueling. Because the secondary containment is an integral part of the complete containment system, secondary containment is required at all times that primary containment is required.