



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. 109  
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 July 24, 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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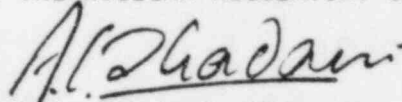
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 109, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Ashok C. Thadani, Director  
PWR Project Directorate #8  
Division of PWR Licensing-B

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 15, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 109

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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 Pages

IX  
X (repositioned)  
XIV  
XV  
3/4 9-19  
B 3/4 9-3  
5-5  
5-6

Insert Pages

IX  
X (repositioned)  
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## REFUELING OPERATIONS

### SHIELDED CASK

#### LIMITING CONDITION FOR OPERATION

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3.9.16.1 All fuel within a distance L from the center of the spent fuel pool cask set-down area shall have decayed for at least 120 days. The distance L equals the major dimension of the shielded cask.

APPLICABILITY: Whenever a shielded cask is on the refueling floor.

#### ACTION:

With the requirements of the above specification not satisfied, do not move a shielded cask to the refueling floor. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.16.1 The decay time of all fuel within a distance L from the center of the spent fuel pool cask set-down area shall be determined to be > 120 days within 24 hours prior to moving a shielded cask to the refueling floor and at least once per 72 hours thereafter.

REFUELING OPERATIONS

SHIELDED CASK

LIMITING CONDITION FOR OPERATION

---

3.9.16.2 Prior to movement of a shielded cask over the cask laydown pit, the boron concentration of the pool shall be maintained uniform and sufficient to maintain a boron concentration of greater than or equal to 800 parts per million (ppm).

APPLICABILITY: Whenever a shielded cask is to be moved over the cask laydown pit.

ACTION:

With the boron concentration less than 800 ppm, suspend all movement of the shielded cask over the cask laydown pit.

SURVEILLANCE REQUIREMENTS

---

4.9.16.2 Verify that the boron concentration is greater than or equal to 800 ppm within 24 hours prior to any movement of a shielded cask over the cask laydown pit.

REFUELING OPERATIONS

MOVEMENT OF FUEL OVER REGION II RACKS

LIMITING CONDITION FOR OPERATION

---

3.9.17 Prior to movement of a fuel assembly over a Region II rack in the spent fuel pool, the boron concentration of the pool shall be maintained uniform and sufficient to maintain a boron concentration of greater than or equal to 800 ppm.

APPLICABILITY: Whenever a fuel assembly is moved over the Region II racks in the spent fuel pool.

ACTION:

With the boron concentration less than 800 ppm, suspend the movement of all fuel over Region II racks.

SURVEILLANCE REQUIREMENTS

---

4.9.17 Verify that the boron concentration is greater than or equal to 800 ppm within 24 hours prior to any movement of a fuel assembly over a Region II rack in the spent fuel pool and every 72 hours thereafter.

REFUELING OPERATIONS

SPENT FUEL POOL

LIMITING CONDITION FOR OPERATION

---

3.9.18 The Reactivity Condition of the spent fuel pool shall be such that  $K_{eff}$  is less than or equal to .95 at all times.

APPLICABILITY: Whenever fuel is in the spent fuel pool.

ACTION:

Borate until  $K_{eff} \leq .95$  is reached.

SURVEILLANCE REQUIREMENTS

---

4.9.18 Ensure that all fuel assemblies to be placed in Region II (as shown in Figure 3.9-2) of the spent fuel pool are within the enrichment and burn-up limits of Figure 3.9.1 by checking the assembly's design and burn-up documentation.

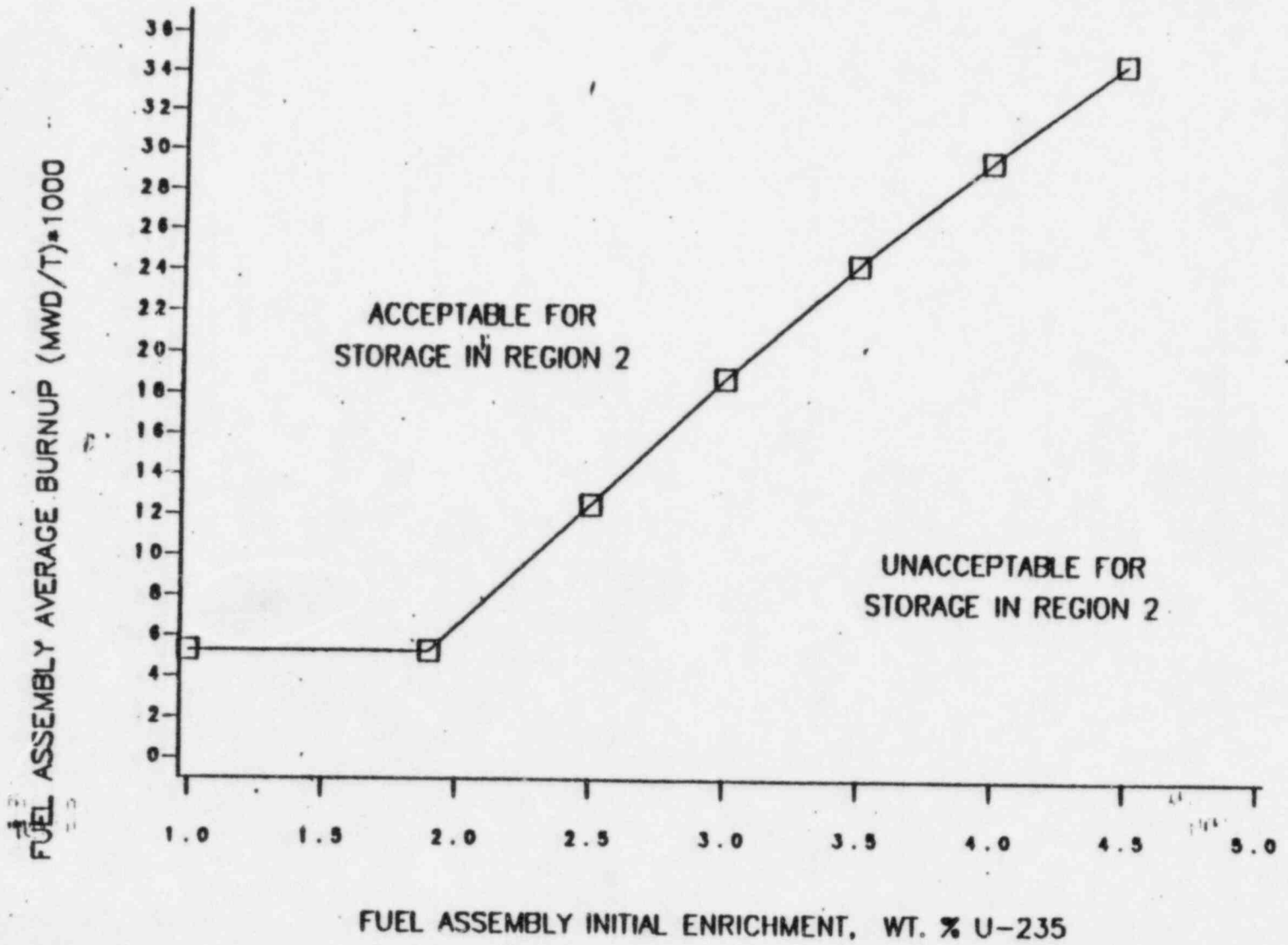
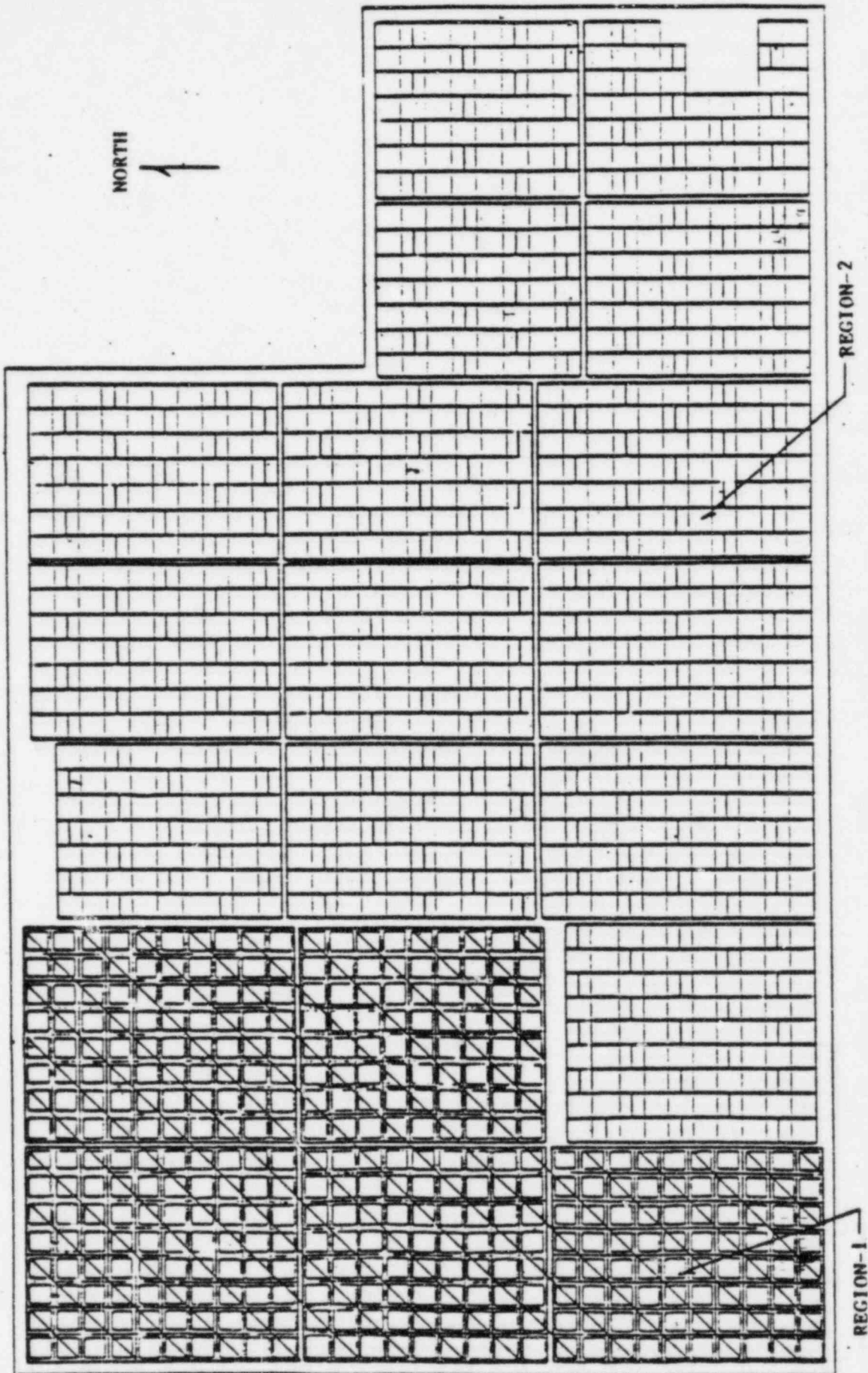


FIGURE 3.9-1 MINIMUM REQUIRED FUEL ASSEMBLY EXPOSURE AS A FUNCTION OF INITIAL ENRICHMENT TO PERMIT STORAGE IN REGION 2



SPENT FUEL POOL ARRANGEMENT UNIT #2

Figure 3.9-2

## REFUELING OPERATIONS

### BASES

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#### 3/4.9.13 STORAGE POOL RADIATION MONITORING

The OPERABILITY of the storage pool radiation monitors ensures that sufficient radiation monitoring capability is available to detect excessive radiation levels resulting from 1) the inadvertent lowering of the storage pool water level or 2) the release of activity from an irradiated fuel assembly.

#### 3/4.9.14 & 3/4 9.15 STORAGE POOL AREA VENTILATION SYSTEM

The limitations on the storage pool area ventilation system ensures that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the accident analyses.

#### 3/4.9.16 SHIELDED CASK

The limitations of this specification ensure that in the event of a cask tilt accident 1) the doses from ruptured fuel assemblies will be within the assumptions of the safety analyses, and 2)  $K_{eff}$  will remain  $\leq .95$ .

#### 3/4.9.17 MOVEMENT OF FUEL OVER REGION II RACKS

The limitations of this specification ensure that, in the event of a fuel assembly drop accident for a fuel assembly dropped into a Region II rack location completing a 4-out-of-4 fuel assembly geometry,  $K_{eff}$  will remain  $\leq .95$ .

#### 3/4.9.18 SPENT FUEL POOL

The limitations described by Figure 3.9-1 ensure that the reactivity of fuel assemblies introduced into the Region II spent fuel racks are conservatively within the assumptions of the safety analysis.



## DESIGN FEATURES

### VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is 10,060 + 700/-0 cubic feet.

### 5.5 EMERGENCY CORE COOLING SYSTEMS

5.5.1 The emergency core cooling systems are designed and shall be maintained in accordance with the original design provisions contained in Section 6.3 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

### 5.6 FUEL STORAGE

#### CRITICALITY

5.6.1 a) The new fuel (dry) storage racks are designed and shall be maintained with sufficient center to center distance between assemblies to ensure a  $K_{eff} \leq .95$ . The maximum fuel enrichment to be stored in these racks is 3.70 weight percent of U-235.

b) Region I of the spent fuel storage pool is designed and shall be maintained with a nominal 9.8 inch center to center distance between storage locations to ensure a  $K_{eff} \leq .95$  with the storage pool filled with unborated water. Fuel assemblies stored in this region may have a maximum fuel enrichment of 4.5 weight percent of U-235.

c) Region II of the spent fuel storage pool is designed and shall be maintained with a 9.0 inch center to center distance between storage locations to ensure a  $K_{eff} \leq .95$  with the storage pool filled with unborated water. Fuel assemblies stored in this region must comply with Figure 3.9-1 to ensure that at least 85% of the design burn-up has been sustained.

#### DRAINAGE

5.6.2 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 22'6".

#### CAPACITY

5.6.3 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 384 storage locations in Region I and 728 storage locations in Region II for a total of 1112 storage locations.

### 5.7 SEISMIC CLASSIFICATION

5.7.1 Those structures, systems and components identified as Category I Items in Section 5.1.1 of the FSAR shall be designed and maintained to the original design provisions contained in Section 5.8 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

## DESIGN FEATURES

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### 5.8 METEOROLOGICAL TOWER LOCATION

5.8.1 The meteorological tower location shall be as shown on Figure 5.1-1.

### 5.9 SHORELINE PROTECTION

5.9.1 The provisions for shoreline protection described in Amendments 34, 35 and 36 to the FSAR shall be completed by June 15, 1976.