UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 172
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 May 14, 1993, as supplemented by letters dated June 10, July 16, November 30, December 1, 1993 and January 27, 1994, 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 Appendix A, as revised through Amendment No. 172, 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 to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 1, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 172

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 areas of change.

Remove	Insert
1-8	1-8
3/4 9-19	3/4 9-19
3/4 9-22	3/4 9-22
3/4 9-23	3/4 9-23
--	3/4 9-23a
3/4 9-24	3/4 9-24
3/4 9-26	3/4 9/26
B 3/4 9-3	B 3/4 9/3
B 3/4 9-4	B 3/4 9-4
5-5	5-5
5-5a	5-5a

VENTING

1.35 VENTING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is not provided or required during venting. Vent, used in system names, does not imply a VENTING process.

MEMBER(S) OF THE PUBLIC

1.36 MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the utility, its contractors or its vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational or other purposes not associated with the plant.

The term "REAL MEMBER OF THE PUBLIC" means an individual who is exposed to existing dose pathways at one particular location.

SITE BOUNDARY

1.37 The SITE BOUNDARY shall be that line beyond which the land is not owned, leased or otherwise controlled by the licensee.

UNRESTRICTED AREA

1.38 An UNRESTRICTED AREA shall be any area at or beyond the site boundary to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for residential quarters or industrial, commercial institutional and/or recreational purposes.

STORAGE PATTERN

1.39 The Region B spent fuel racks contain a cell blocking device in every 4th rack location for administrative control. This 4th location will be referred to as the blocked location. A STORAGE PATTERN refers to a blocked location and all adjacent and diagonal cell locations surrounding the blocked location within the respective region.

REFUELING OPERATIONS

SHIELDED CASK

LIMITING CONDITION FOR OPERATION

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 1 year. 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 snielded cask to the refueling floor. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

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 $\geq$ 1 year within 24 hours prior to moving a shielded cask to the refueling floor and at least once per 72 hours thereafter.

REFUELING OPERATIONS

SPENT FUEL POOL--REACTIVITY CONDITION

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 0.95 at all times.

APPLICABILITY: Whenever fuel is in the spent fuel pool.

ACTION:

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

SURVEILLANCE REQUIREMENT

4.9.18.1 Ensure that all fuel assemblies to be placed in Region C (as shown in Figure 3.9-2) of the spent fuel pool satisfy either:

(a) Fuel assembly enrichment and burnup are within the limits of Figure 3.9-1a by checking the assembly's design and burnup documentation; or

(b) Fuel assembly enrichment and burnup are within the limits of Figure 3.9-1b by checking the assembly's design and burnup documentation, and borated stainless steel poison pins are installed in the assembly's center guide tube and in two diagonally opposite guide tubes.

4.9.18.2 Ensure that the contents of each consolidated fuel storage box to be placed in Region C (as shown in Figure 3.9-2) of the spent fuel pool are within the enrichment and burn-up limits of Figure 3.9-3 by checking the design and burn-up documentation for storage box contents.

4.9.18.3 Ensure that all fuel assemblies to be placed in Region A (as shown in Figure 3.9-2) of the spent fuel pool are within the enrichment and burnup limits of Figure 3.9-4 by checking the assembly's design and burnup documentation.

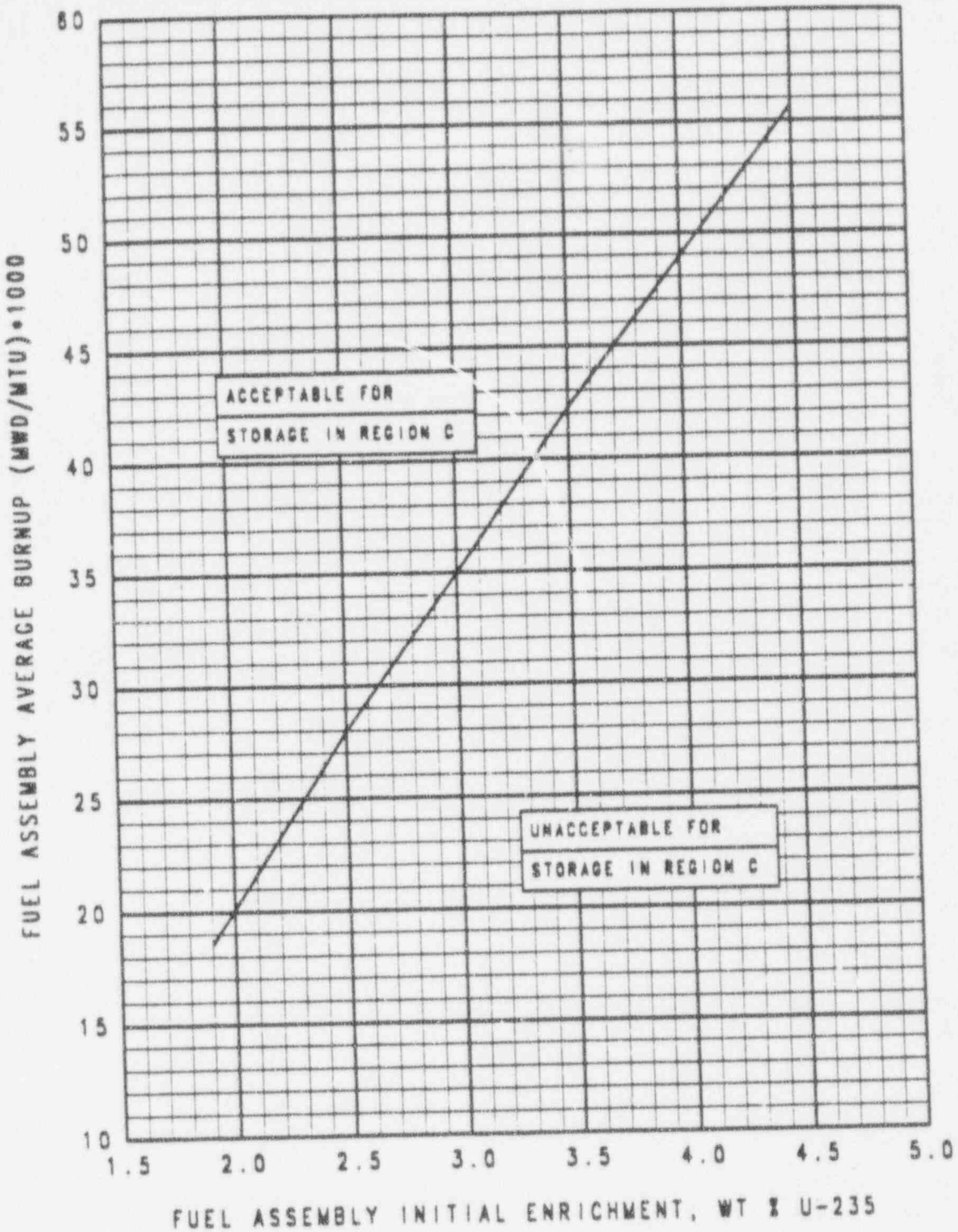


FIGURE 3.9-1A MINIMUM REQUIRED FUEL ASSEMBLY EXPOSURE AS A FUNCTION OF INITIAL ENRICHMENT TO PERMIT STORAGE IN REGION C

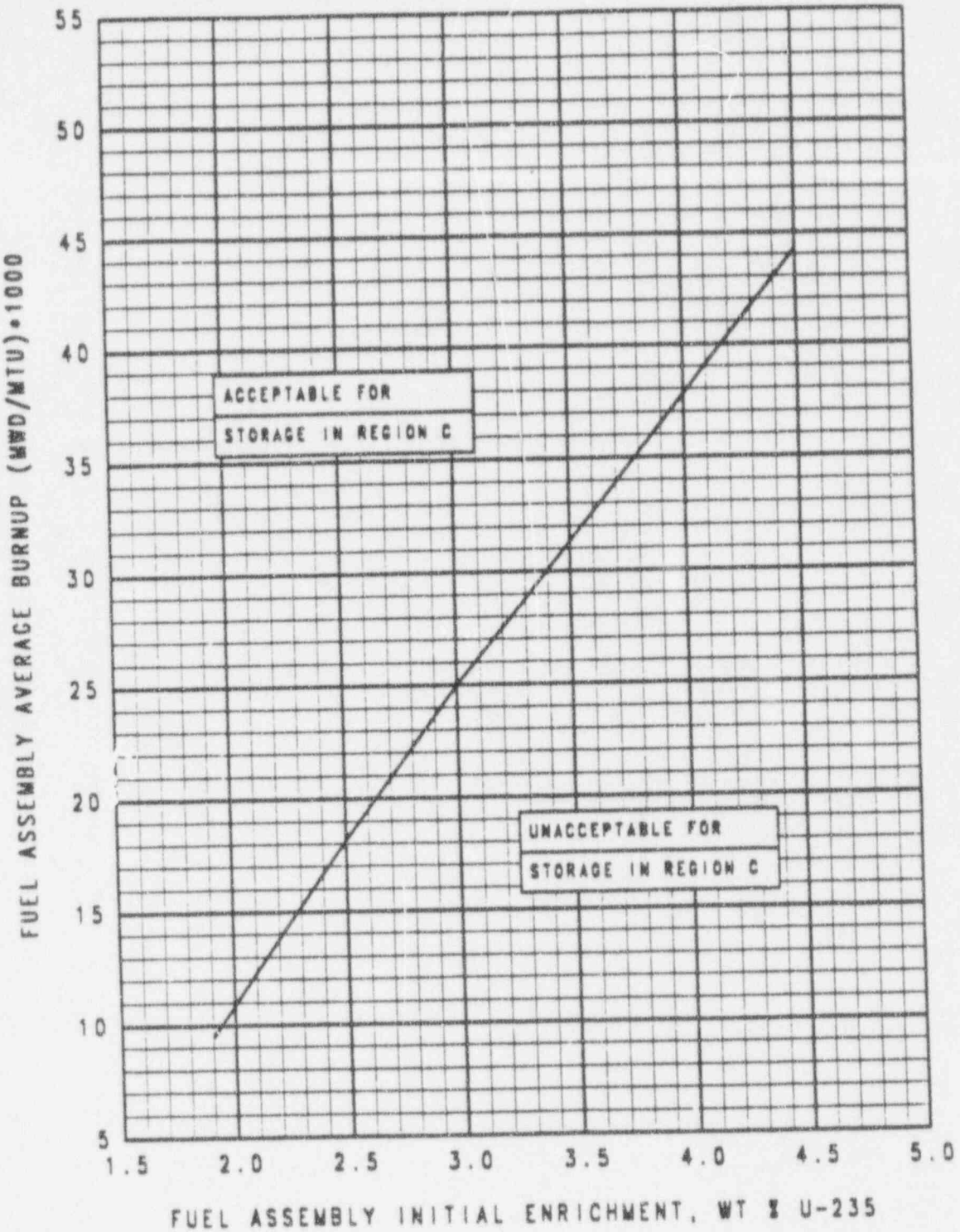
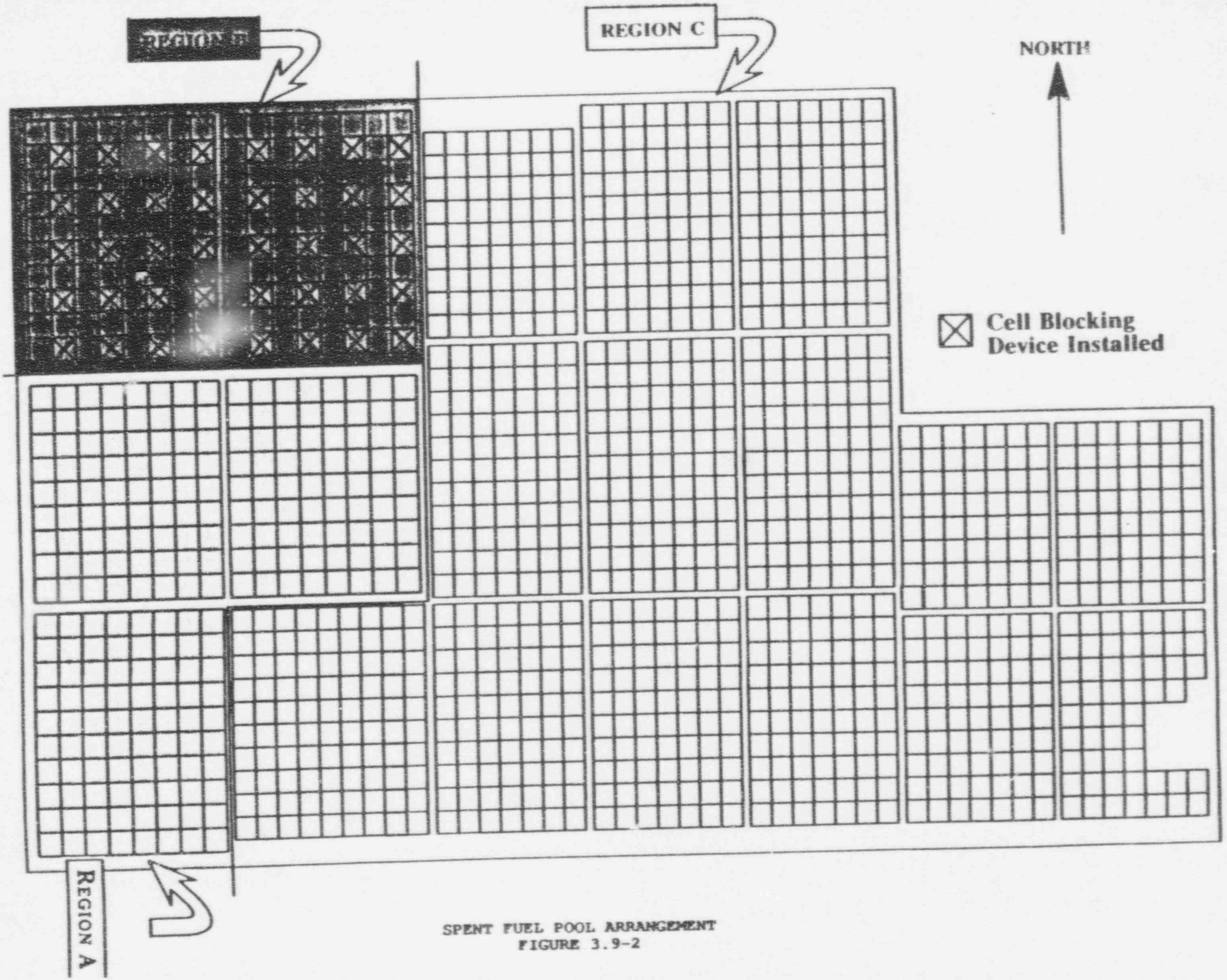


FIGURE 3.9-1B MINIMUM REQUIRED FUEL ASSEMBLY EXPOSURE AS A FUNCTION OF INITIAL ENRICHMENT TO PERMIT STORAGE IN REGION C WITH POISON PINS INSTALLED



SPENT FUEL POOL ARRANGEMENT
FIGURE 3.9-2

REFUELING OPERATIONS

SPENT FUEL POOL - STORAGE PATTERN

LIMITING CONDITION FOR OPERATION

3.9.19 Each STORAGE PATTERN of the Region B spent fuel pool racks shall require that:

(1) A cell blocking device is installed in those cell locations shown in Figure 3.9-2; or

(2) If a cell blocking device has been removed, all cells in the STORAGE PATTERN must be vacant of stored fuel assemblies.

APPLICABILITY: Fuel in the spent fuel pool.

ACTION:

Take immediate action to comply with either 3.9.19(1) or (2).

SURVEILLANCE REQUIREMENTS

4.9.19 Verify that 3.9.19 is satisfied prior to removing a cell blocking device.

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 an event of a cask tilt accident 1) the doses from ruptured fuel assemblies will be within the assumptions of the safety analyses, 2) K_{eff} will remain $\leq$ .95.

3/4.9.17 MOVEMENT OF FUEL IN SPENT FUEL POOL

The limitations of this specification ensure that, in the event of a fuel assembly or a consolidated fuel storage box drop accident into a Region B or C rack location completing a 4-out-of-4 fuel assembly geometry, K_{eff} will remain $\leq$ 0.95.

3/4.9.18 SPENT FUEL POOL - REACTIVITY CONDITION

The limitations described by Figures 3.9-1a, 3.9-1b, and 3.9-3 ensure that the reactivity of fuel assemblies and consolidated fuel storage boxes, introduced into the Region C spent fuel racks, are conservatively within the assumptions of the safety analysis.

The limitations described by Figure 3.9-4 ensure that the reactivity of the fuel assemblies, introducted into the Region A spent fuel racks, are conservatively within the assumptions of the safety analysis.

3/4.9.19 SPENT FUEL POOL - STORAGE PATTERN

The limitations of this specification ensure that the reactivity condition of the Region B storage racks and spent fuel pool K_{eff} will remain less than or equal to 0.95.

The Cell Blocking Devices in the 4th location of the Region B storage racks are designed to prevent inadvertent placement and/or storage in the blocked locations. The blocked location remains empty to provide the flux trap to maintain reactivity control for fuel assembly storage in any adjacent locations. Region B is designed for the storage of new assemblies in the spent fuel pool, and for fuel assemblies which have not sustained sufficient burnup to be stored in Region A or Region C.

3/4.9.20 SPENT FUEL POOL - CONSOLIDATION

The limitations of these specifications ensure that the decay heat rates and radioactive inventory of the candidate fuel assemblies for consolidation are conservatively within the assumptions of the safety analysis.

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 nominal fuel enrichment to be stored in these racks is 4.50 weight percent of U-235.

b) Region A 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 must comply with Figure 3.9-4 to ensure that the design burnup has been sustained.

c) Region B 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 $K_{eff} \leq .95$ with a storage pool filled with unborated water. Fuel assemblies stored in this region may have a maximum nominal enrichment of 4.5 weight percent U-235. Fuel assemblies stored in this region are placed in a 3 out of 4 STORAGE PATTERN for reactivity control.

d) Region C 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 Figures 3.9-1a or 3.9-1b to ensure that the design burn-up has been sustained. Additionally, fuel assemblies utilizing Figure 3.9-1b require that borated stainless steel poison pins are installed in the fuel assembly's center guide tube and in two diagonally opposite guide tubes. The poison pins are solid 0.87 inch O.D. borated stainless steel, with a boron content of 2 weight percent boron.

e) Region C of the spent fuel storage pool is designed to permit storage of consolidated fuel and ensure a $K_{eff} \leq 0.95$. The contents of consolidated fuel storage boxes to be stored in this region must comply with Figure 3.9-3.

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 224 storage locations in Region A, 160 storage locations in Region B and 962 storage locations in Region C for a total of 1346 storage locations.*

*This translates into 1306 storage locations to receive spent fuel and 40 storage locations to remain blocked.