3.7 PLANT SYSTEMS

3.7.17 Spent Fuel Pool Storage

LCO 3.7.17 The combination of initial enrichment, burnup and decay time of each fuel assembly stored in the spent fuel pool shall be within the Unrestricted Region of Figure 3.7.17-1 or in accordance with Specification 4.3.1.1.

APPLICABILITY: Whenever any fuel assembly is stored in the spent fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	A.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Initiate action to move the noncomplying fuel assembly to an acceptable location.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.17.1	Verify by administrative means the initial enrichment, burnup and decay time of the fuel assembly is in accordance with Figure 3.7.17-1 or Specification 4.3.1.1.	Prior to storing or moving the fuel assembly
SR 3.7.17.2	Verify spent fuel pool inventory.	Within 7 days after completion of a spent fuel pool fuel handling campaign

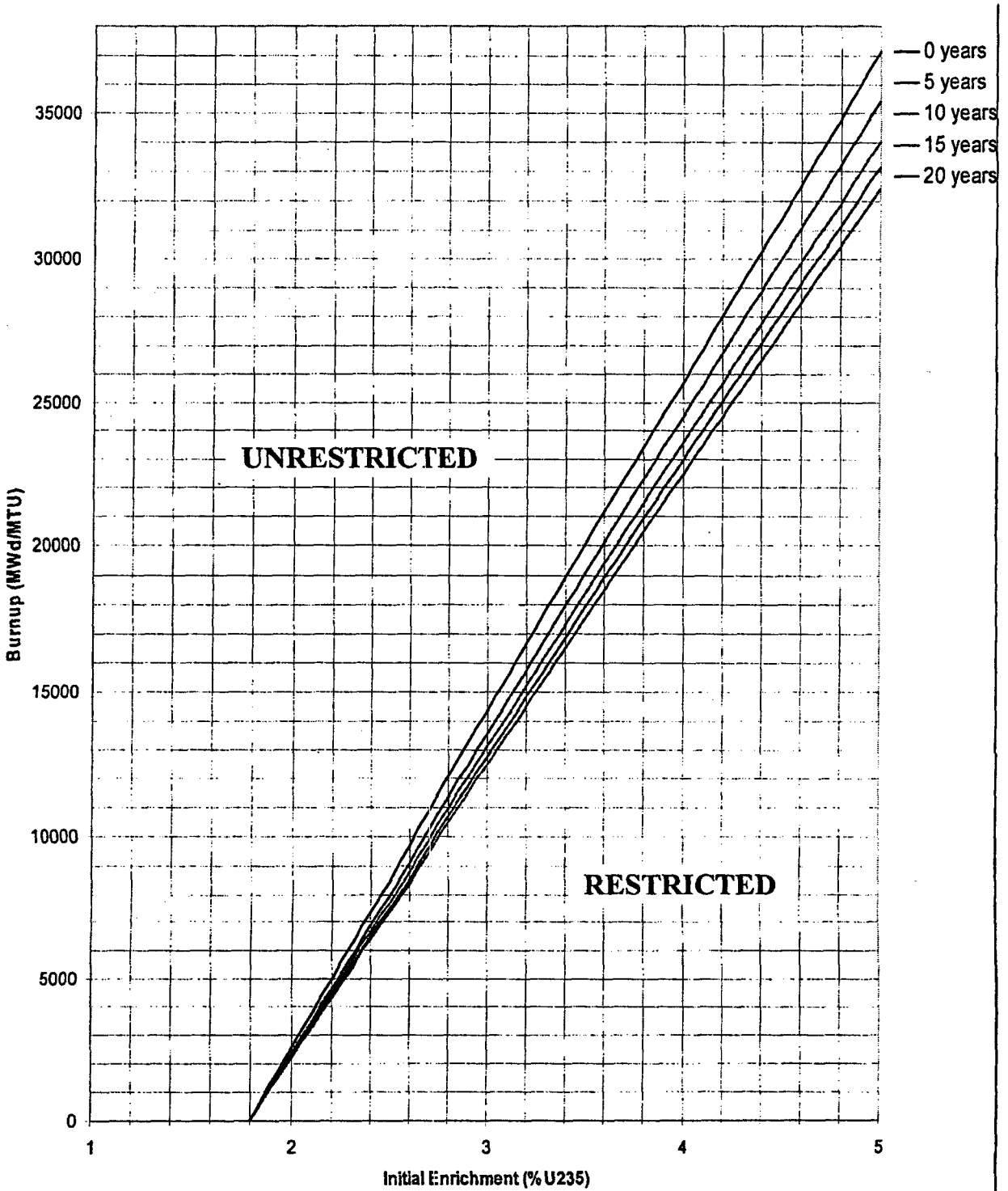


Figure 3.7.17-1
Spent Fuel Pool Unrestricted Region Burnup and Decay Time Requirements

4.0 DESIGN FEATURES (continued)

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent;

b. $k_{eff} < 1.0$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Reference 1;

c. $k_{eff} \leq 0.95$ if fully flooded with water borated to 730 ppm, which includes an allowance for uncertainties as described in Reference 1;

d. A nominal 9.5 inch center to center distance between fuel assemblies placed in the fuel storage racks;

e. New or spent fuel assemblies with a combination of discharge burnup, initial enrichment and decay time in the "unrestricted range" of Figure 3.7.17-1 may be allowed unrestricted storage in the fuel storage racks; and

f. New or spent fuel assemblies with a combination of discharge burnup, initial enrichment and decay time in the "restricted range" of Figure 3.7.17-1 will be stored in compliance with Figures 4.3.1-1 through 4.3.1-4.

4.0 DESIGN FEATURES

4.3 Fuel Storage (continued)

4.3.3 Capacity

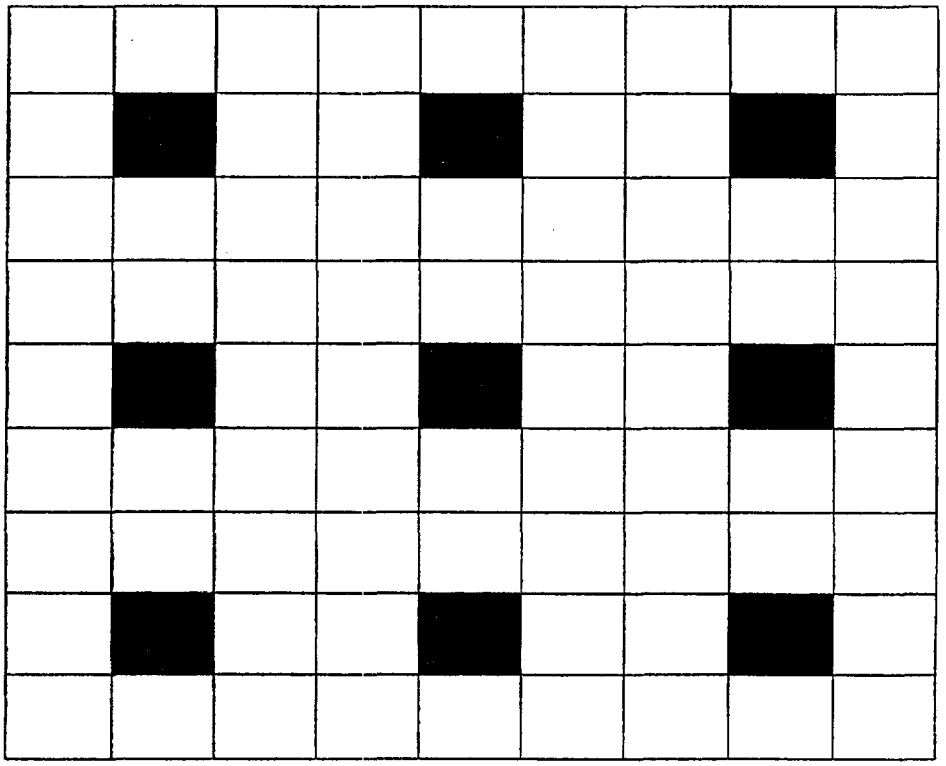
The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1386 fuel assemblies not including those assemblies which can be returned to the reactor. The southeast corner of the small pool serves as the spent fuel cask lay down area. To facilitate plant evolutions, four additional storage racks, with a combined capacity of 196, may be temporarily installed in the cask lay down area to provide a total of 1582 storage locations (Ref. 3).

REFERENCES

1. "Prairie Island Units 1 & 2 Spent Fuel Pool Criticality Analysis", Calculation Note Number CN-WFE-03-40, Westinghouse Electric Company, November 11, 2004.

2. "Criticality Analysis of the Prairie Island Units 1 & 2 Fresh and Spent Fuel Racks", Westinghouse Commercial Nuclear Fuel Division, February 1993.

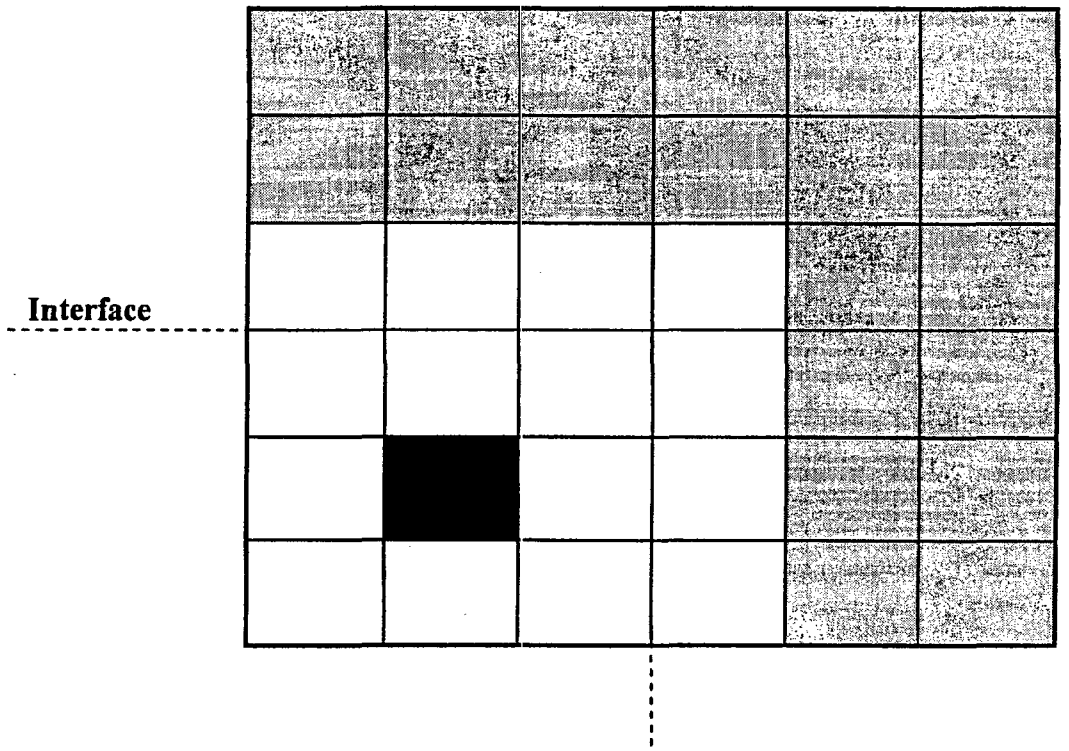
3. USAR, Section 10.2.



Fresh Fuel: Must be less than or equal to Nominal 4.95 w/o ^{235}U
No restrictions on burnup
Assemblies with GAD shall have a minimum of 4 fuel rods with a minimum concentration of 4.0 w/o Gd_2O_3.

Burned Fuel: Must satisfy minimum burnup requirements of Figures 4.3.1-3 or 4.3.1-4 depending on presence of GAD rods in fresh fuel

Figure 4.3.1-1
Spent Fuel Pool Burned/Fresh Checkerboard Cell Layout



	Fresh Fuel:	Must be less than or equal to nominal 4.95 w/o ^{235}U No restrictions on burnup
	Burned Fuel:	3x3 Checkerboard Region Must satisfy minimum burnup requirements of Figure 4.3.1-3 or 4.3.1-4
	Burned Fuel:	All Cell Unrestricted Region Must satisfy minimum burnup requirements of Figure 3.7.17-1

Figure 4.3.1-2
Spent Fuel Pool Checkerboard Interface Requirements

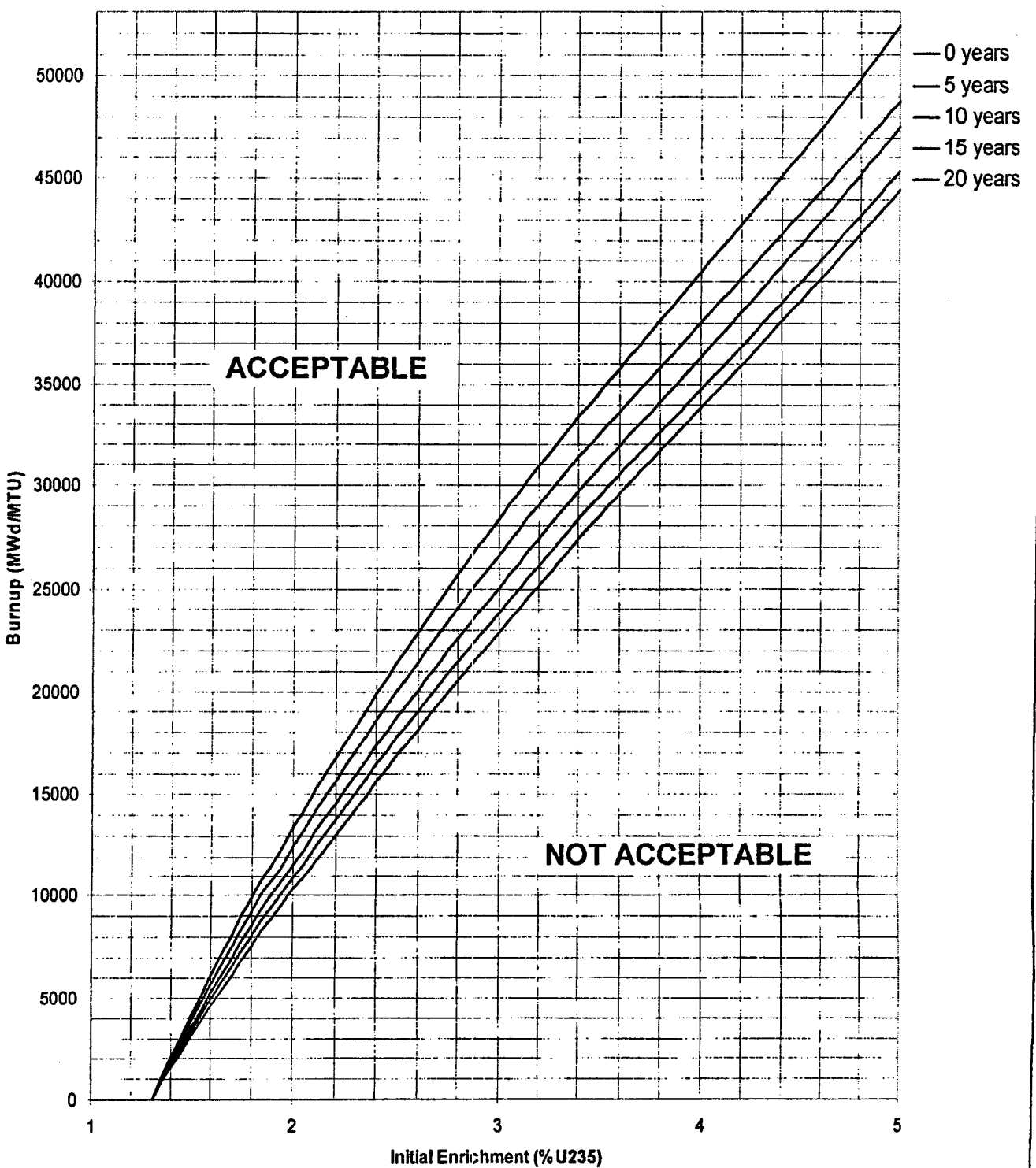


Figure 4.3.1-3
Spent Fuel Pool Checkerboard Region Burnup and Decay Time Requirements
- No GAD

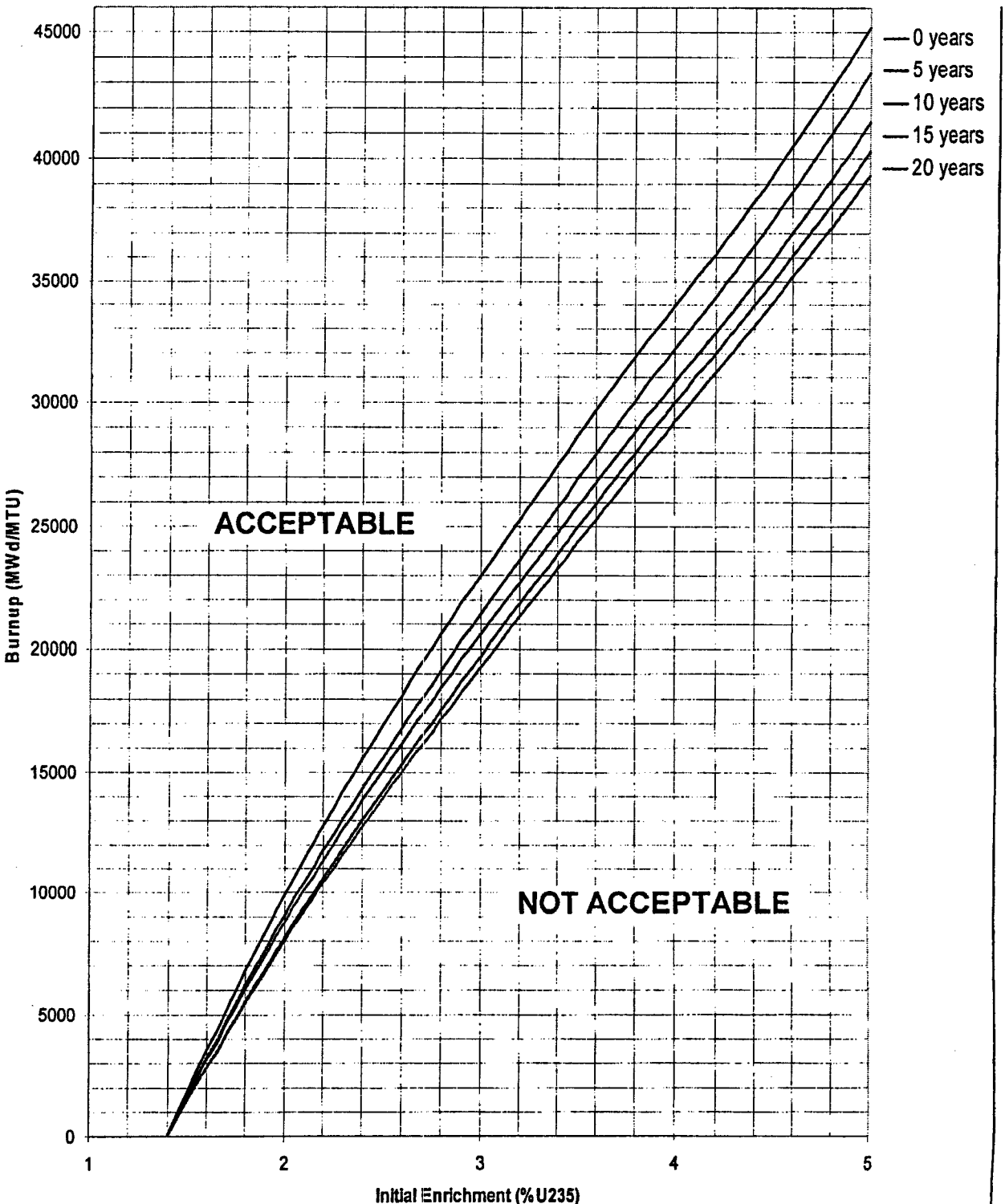


Figure 4.3.1-4
Spent Fuel Pool Checkerboard Region Burnup and Decay Time Requirements - Fuel with GAD

3.7 PLANT SYSTEMS

3.7.17 Spent Fuel Pool Storage

LCO 3.7.17 The combination of initial enrichment, burnup and decay time of each fuel assembly stored in the spent fuel pool shall be within the Unrestricted Region of Figure 3.7.17-1 or in accordance with Specification 4.3.1.1.

APPLICABILITY: Whenever any fuel assembly is stored in the spent fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	A.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Initiate action to move the noncomplying fuel assembly to an acceptable location.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.17.1	Verify by administrative means the initial enrichment, burnup and decay time of the fuel assembly is in accordance with Figure 3.7.17-1 or Specification 4.3.1.1.	Prior to storing or moving the fuel assembly
SR 3.7.17.2	Verify spent fuel pool inventory.	Within 7 days after completion of a spent fuel pool fuel handling campaign

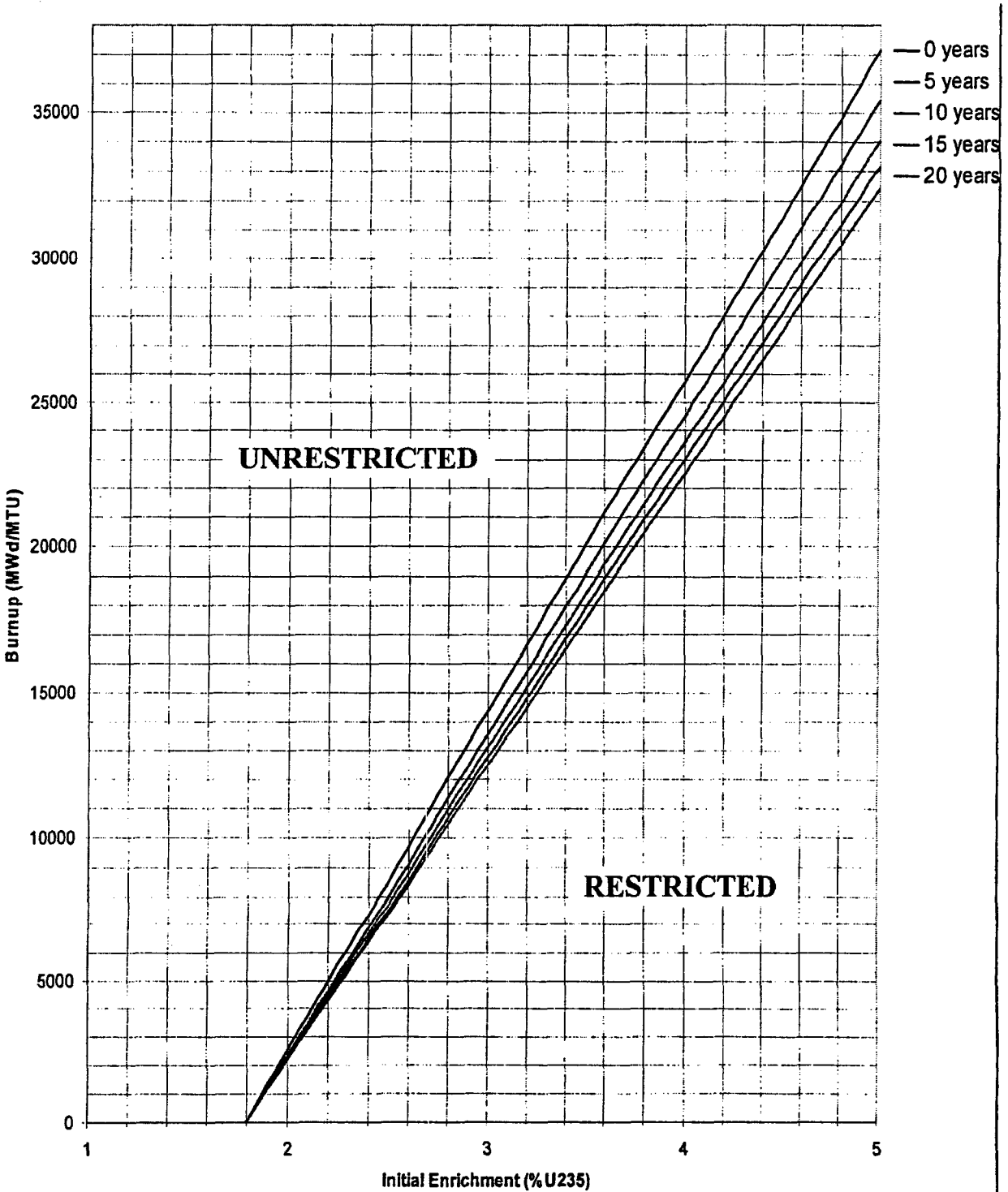


Figure 3.7.17-1
Spent Fuel Pool Unrestricted Region Burnup and Decay Time Requirements

4.0 DESIGN FEATURES (continued)

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent;

b. $k_{eff} < 1.0$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Reference 1;

c. $k_{eff} \leq 0.95$ if fully flooded with water borated to 730 ppm, which includes an allowance for uncertainties as described in Reference 1;

d. A nominal 9.5 inch center to center distance between fuel assemblies placed in the fuel storage racks;

e. New or spent fuel assemblies with a combination of discharge burnup, initial enrichment and decay time in the "unrestricted range" of Figure 3.7.17-1 may be allowed unrestricted storage in the fuel storage racks; and

f. New or spent fuel assemblies with a combination of discharge burnup, initial enrichment and decay time in the "restricted range" of Figure 3.7.17-1 will be stored in compliance with Figures 4.3.1-1 through 4.3.1-4.

4.0 DESIGN FEATURES

4.3 Fuel Storage (continued)

4.3.3 Capacity

The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1386 fuel assemblies not including those assemblies which can be returned to the reactor. The southeast corner of the small pool serves as the spent fuel cask lay down area. To facilitate plant evolutions, four additional storage racks, with a combined capacity of 196, may be temporarily installed in the cask lay down area to provide a total of 1582 storage locations (Ref. 3).

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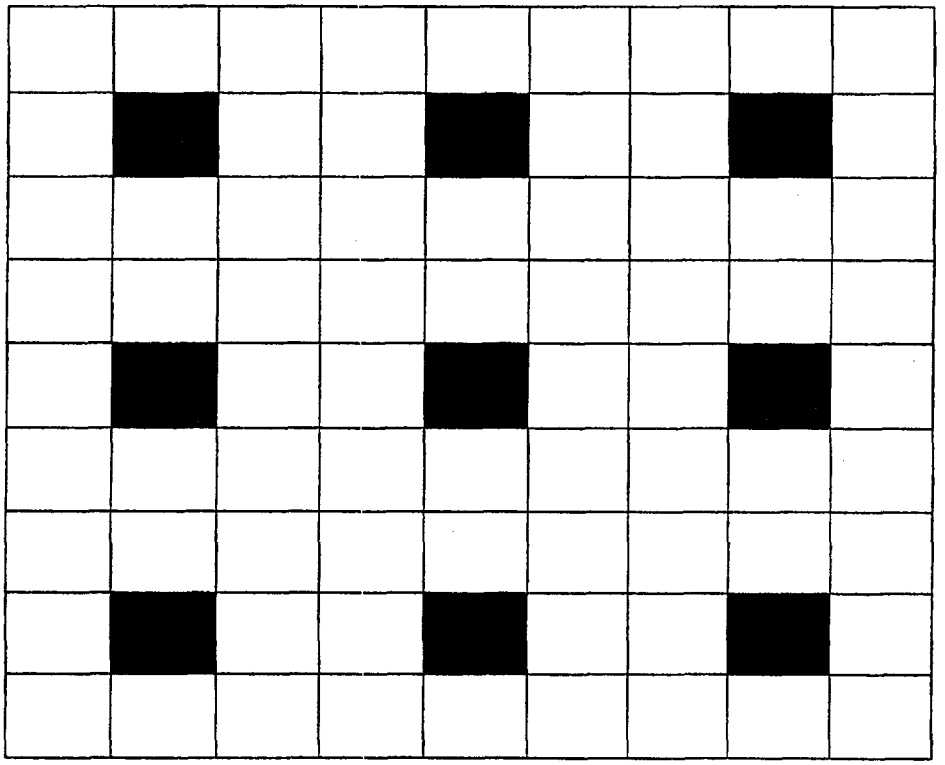
1. "Prairie Island Units 1 & 2 Spent Fuel Pool Criticality Analysis", Calculation Note Number CN-WFE-03-40, Westinghouse Electric Company, November 11, 2004.

2. "Criticality Analysis of the Prairie Island Units 1 & 2 Fresh and Spent Fuel Racks", Westinghouse Commercial Nuclear Fuel Division, February 1993.

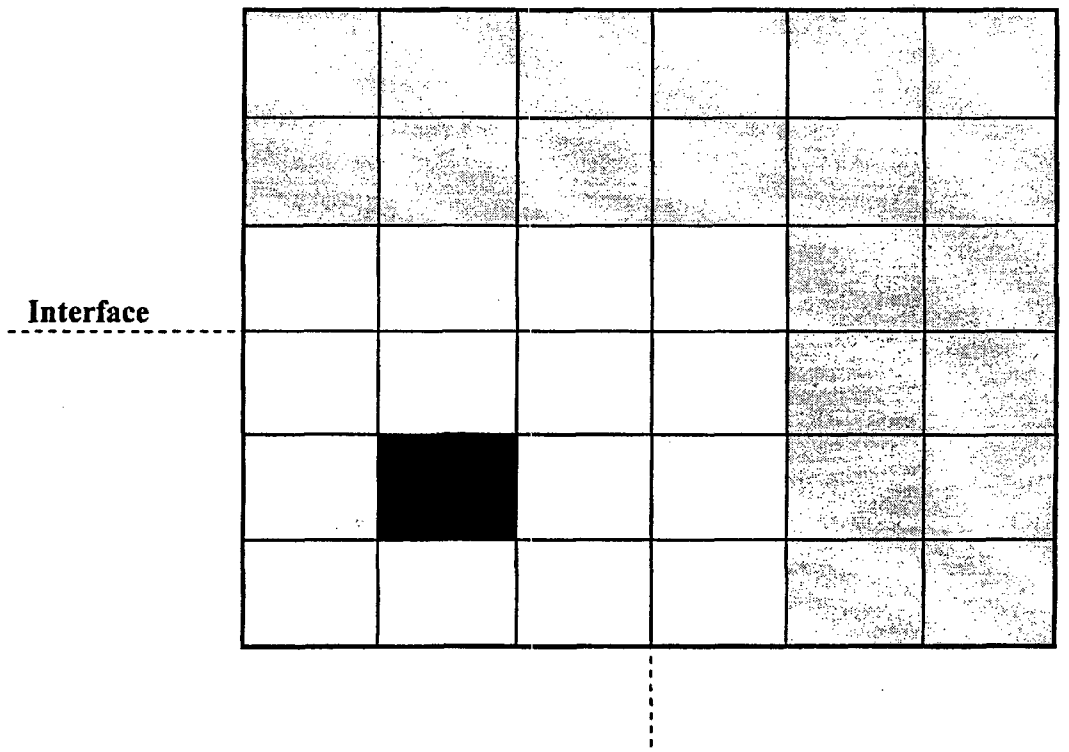
3. USAR, Section 10.2.



Fresh Fuel: Must be less than or equal to Nominal 4.95 w/o ^{235}U
No restrictions on burnup
Assemblies with GAD shall have a minimum of 4 fuel rods with a minimum concentration of 4.0 w/o Gd_2O_3.

Burned Fuel: Must satisfy minimum burnup requirements of Figures 4.3.1-3 or 4.3.1-4 depending on presence of GAD rods in fresh fuel

Figure 4.3.1-1
Spent Fuel Pool Burned/Fresh Checkerboard Cell Layout



	Fresh Fuel:	Must be less than or equal to nominal 4.95 w/o ^{235}U No restrictions on burnup
	Burned Fuel:	3x3 Checkerboard Region Must satisfy minimum burnup requirements of Figure 4.3.1-3 or 4.3.1-4
	Burned Fuel:	All Cell Unrestricted Region Must satisfy minimum burnup requirements of Figure 3.7.17-1

Figure 4.3.1-2
Spent Fuel Pool Checkerboard Interface Requirements

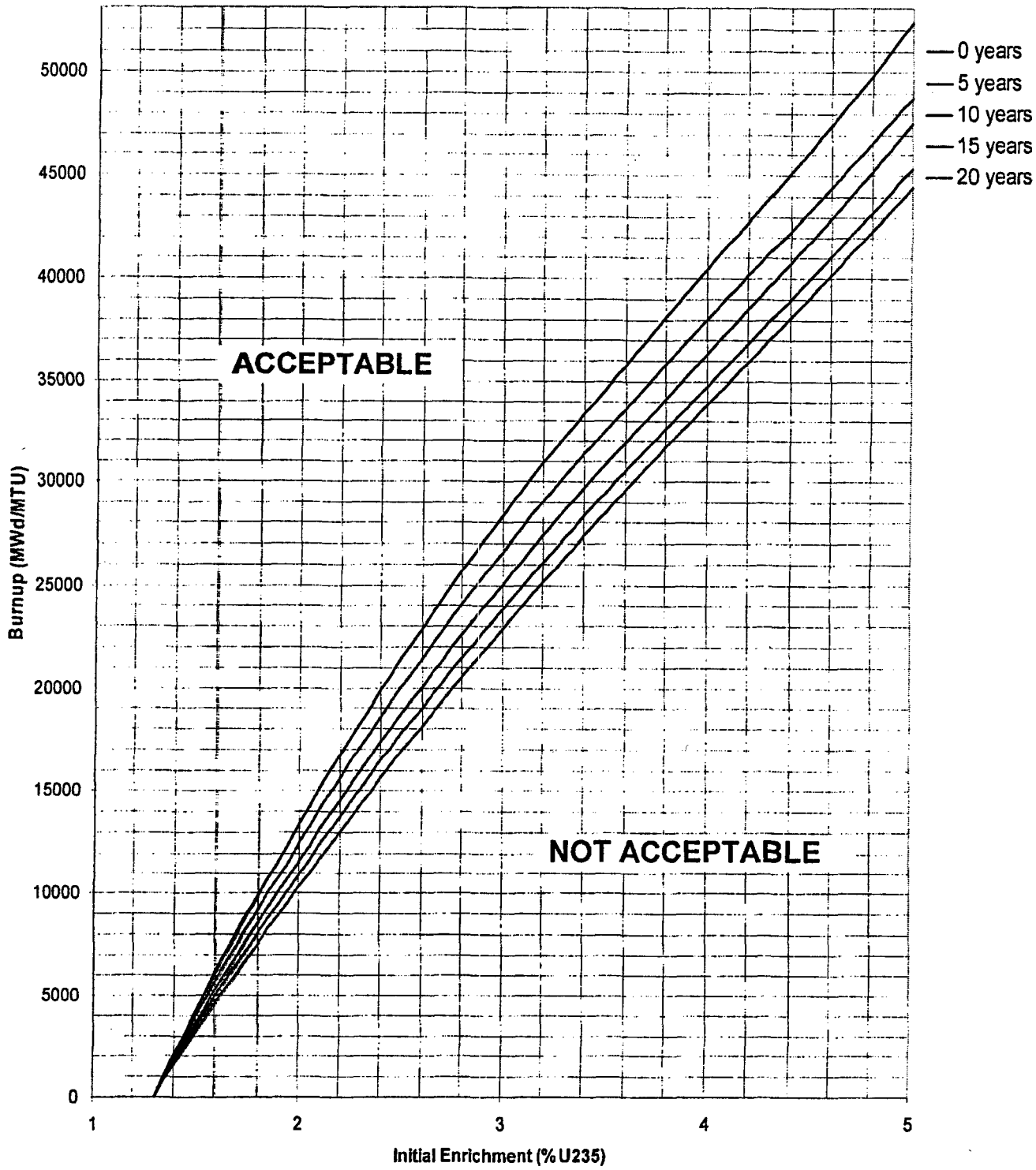


Figure 4.3.1-3
Spent Fuel Pool Checkerboard Region Burnup and Decay Time Requirements
- No GAD

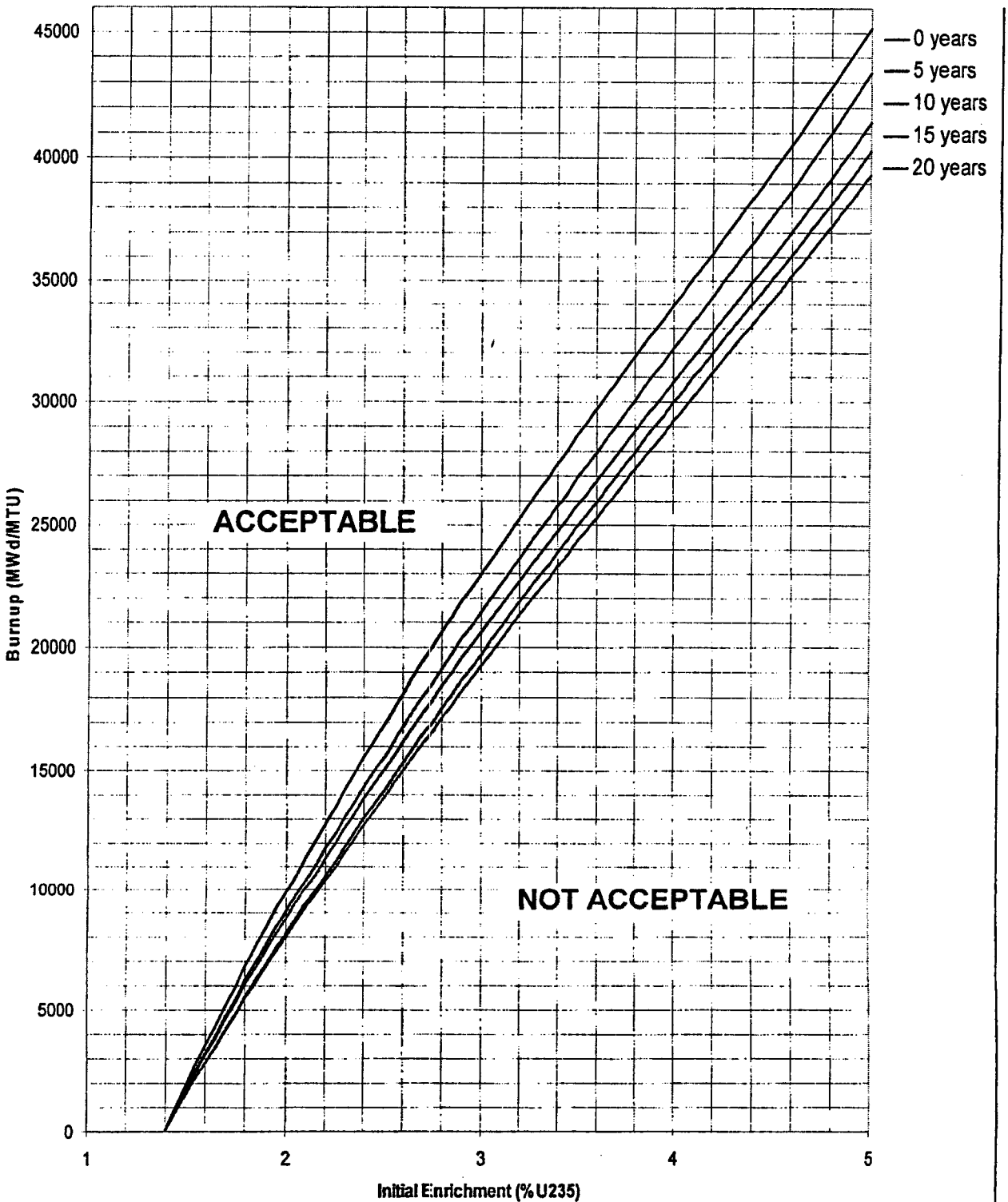


Figure 4.3.1-4
Spent Fuel Pool Checkerboard Region Burnup and Decay Time Requirements - Fuel with GAD