

- (b) Pursuant to the Act and 10 CFR Part 70, to possess and use four (4) mixed oxide fuel assemblies in accordance with the RG&E's application dated December 14, 1979 (transmitted by letter dated December 20, 1979) as supplemented February 20, 1980 and March 5, 1980;
  - (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup; sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:
- (1) Maximum Power Level

Ginna LLC is authorized to operate the facility at steady-state power levels up to a maximum of 1775 megawatts (thermal).
  - (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 103, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.
  - (3) Fire Protection
    - (a) The licensee shall implement and maintain in effect all fire protection features described in the licensee's submittals referenced in and as approved or modified by the NRC's Fire Protection Safety Evaluation (SE) dated February 14, 1979 and

3.7 PLANT SYSTEMS

3.7.13 Spent Fuel Pool (SFP) Storage

LCO 3.7.13 The combination of initial enrichment and burnup values, with appropriate decay times, of each fuel assembly stored in the spent fuel pool shall be within the acceptable burnup domain of the applicable Figures 3.7.13-1 through 3.7.13-11, based on region and cell type.

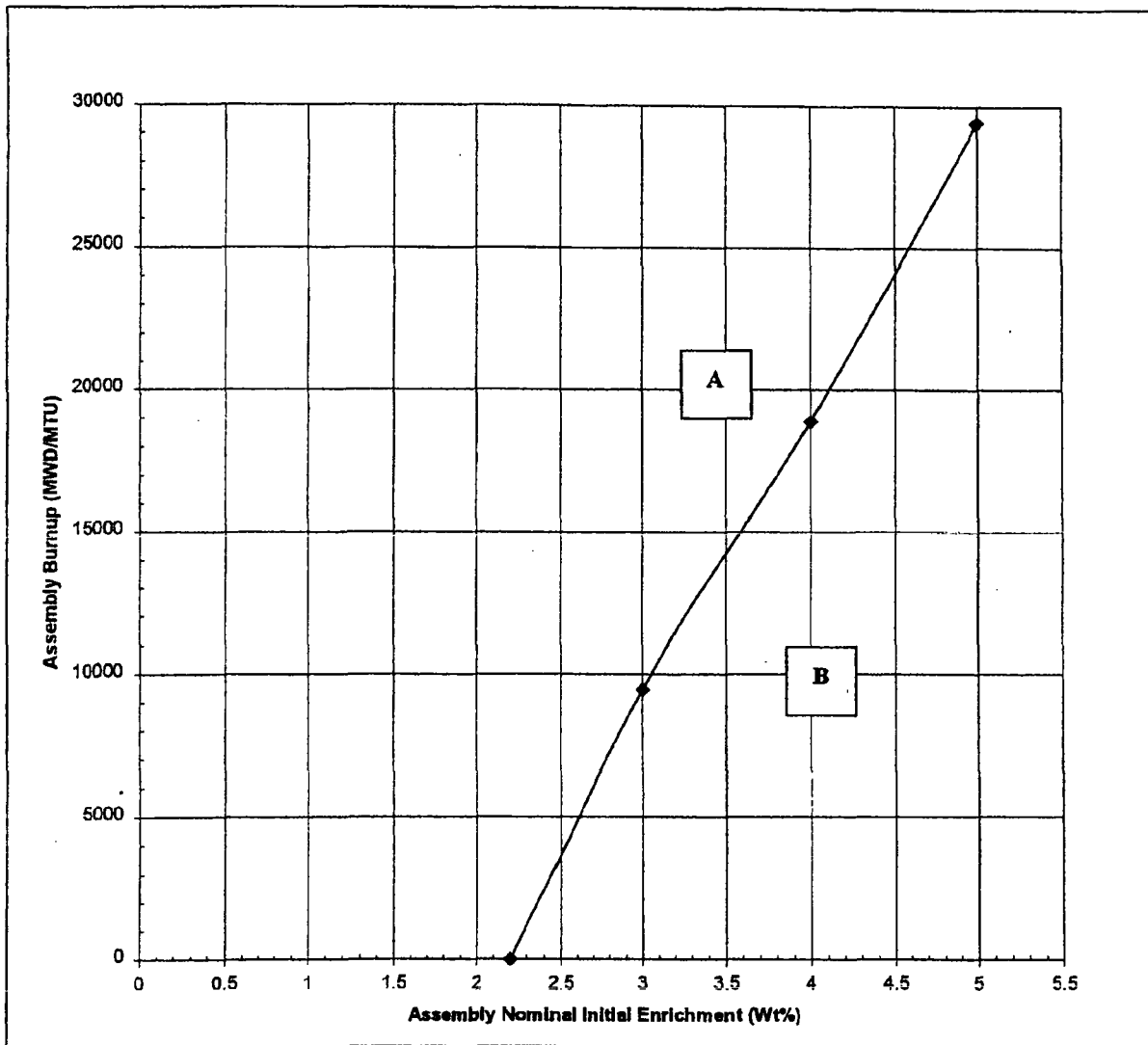
APPLICABILITY: Whenever any fuel assembly is stored in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	<p>A.1</p> <p style="text-align: center;">----- - NOTE - ----- LCO 3.0.3 is not applicable. -----</p> <p>Initiate action to move the noncomplying fuel assembly to an acceptable storage location.</p>	Immediately

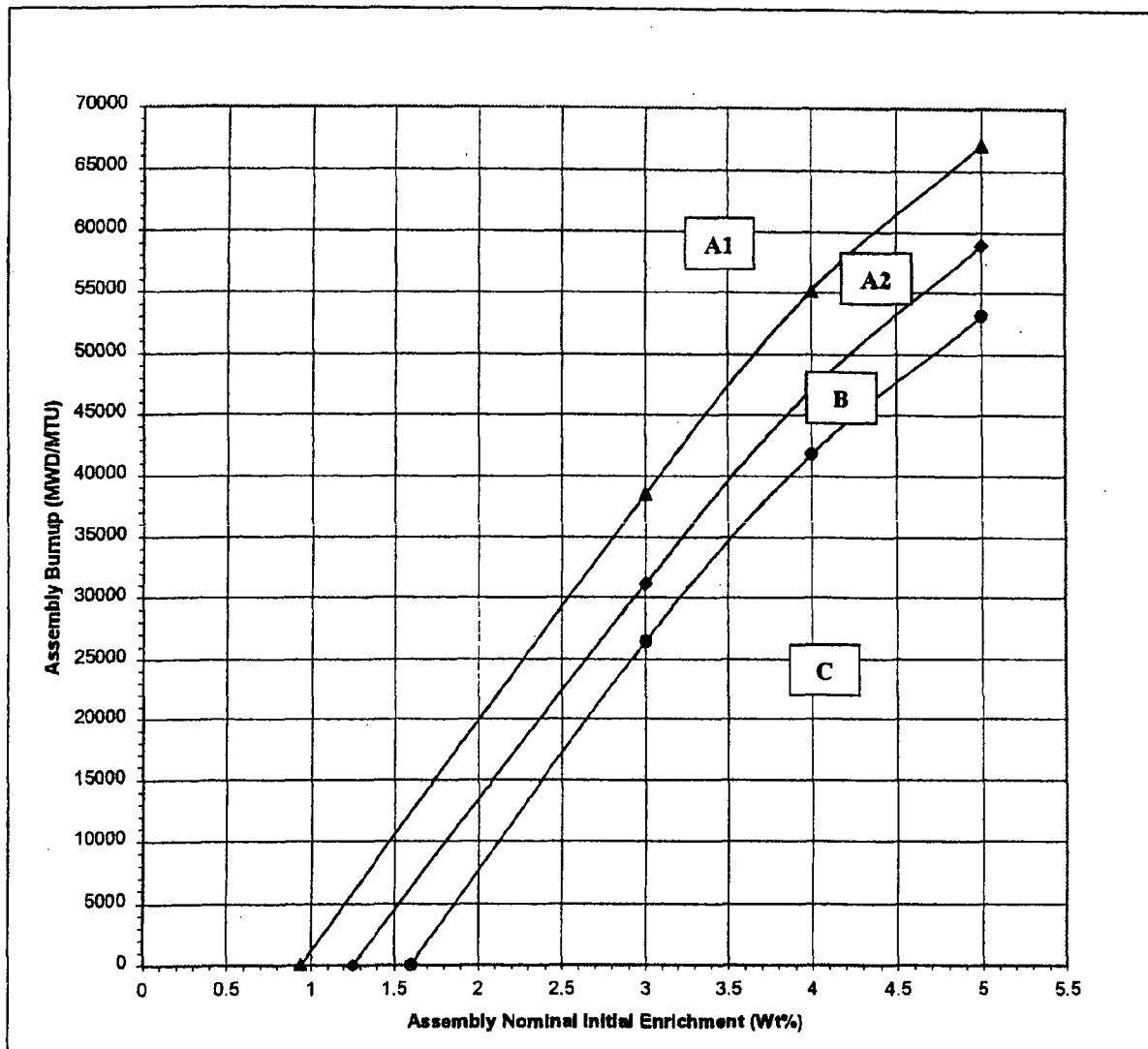
SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.13.1 Verify by administrative means the initial enrichment, burnup, and decay time of the fuel assembly is in accordance with the applicable Figures 3.7.13-1 through 3.7.13-11.	Prior to storing, or moving, the fuel assembly in the spent fuel pool



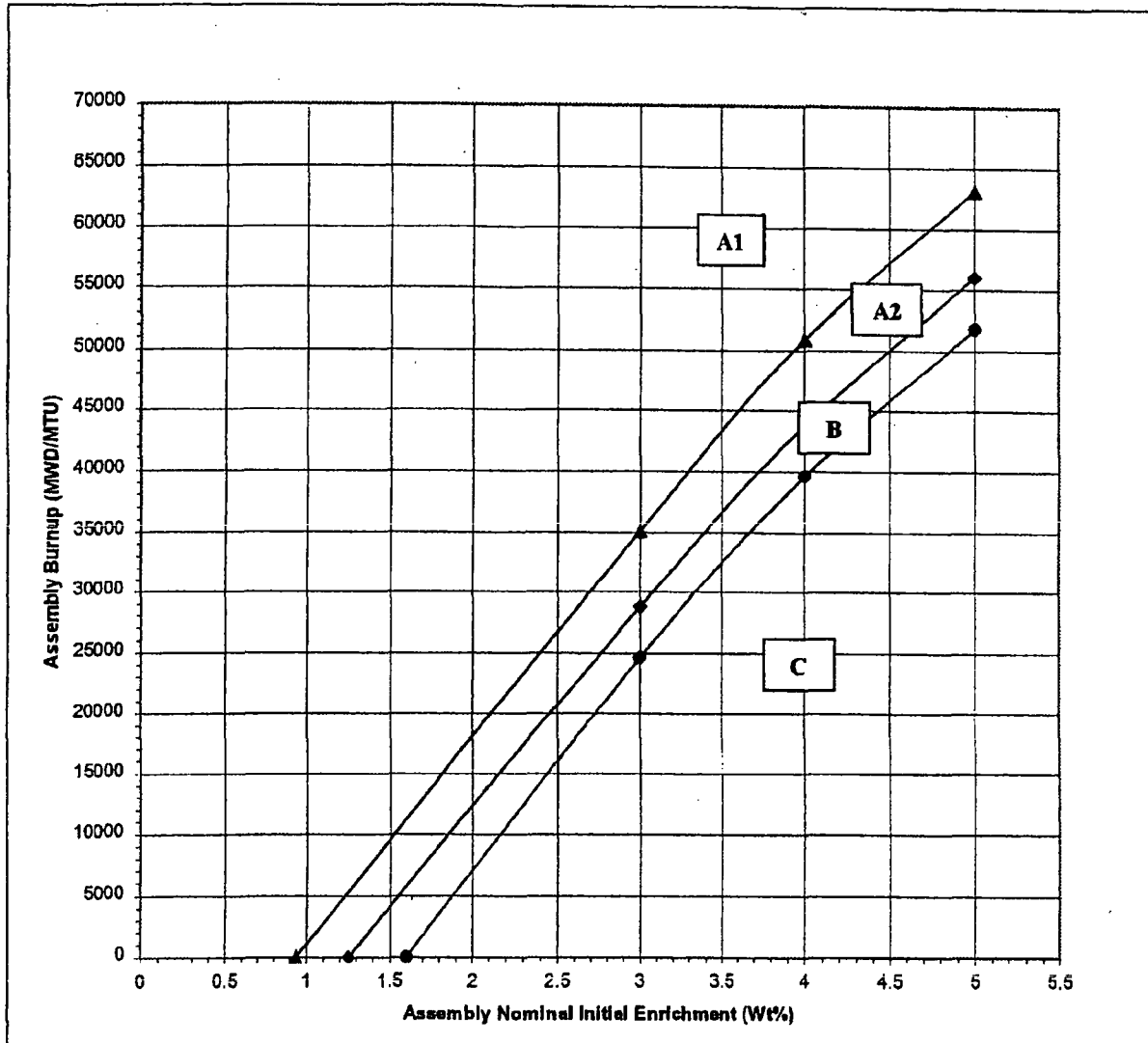
- A Acceptable burnup domain for storage in any location within Region 1
- B Acceptable burnup domain for storage in cells with lead-in funnels only

Figure 3.7.13-1  
Burnup Vs Enrichment Curve for Region 1 Type 3 Cells (Not Pu-241 Decay Dependent)



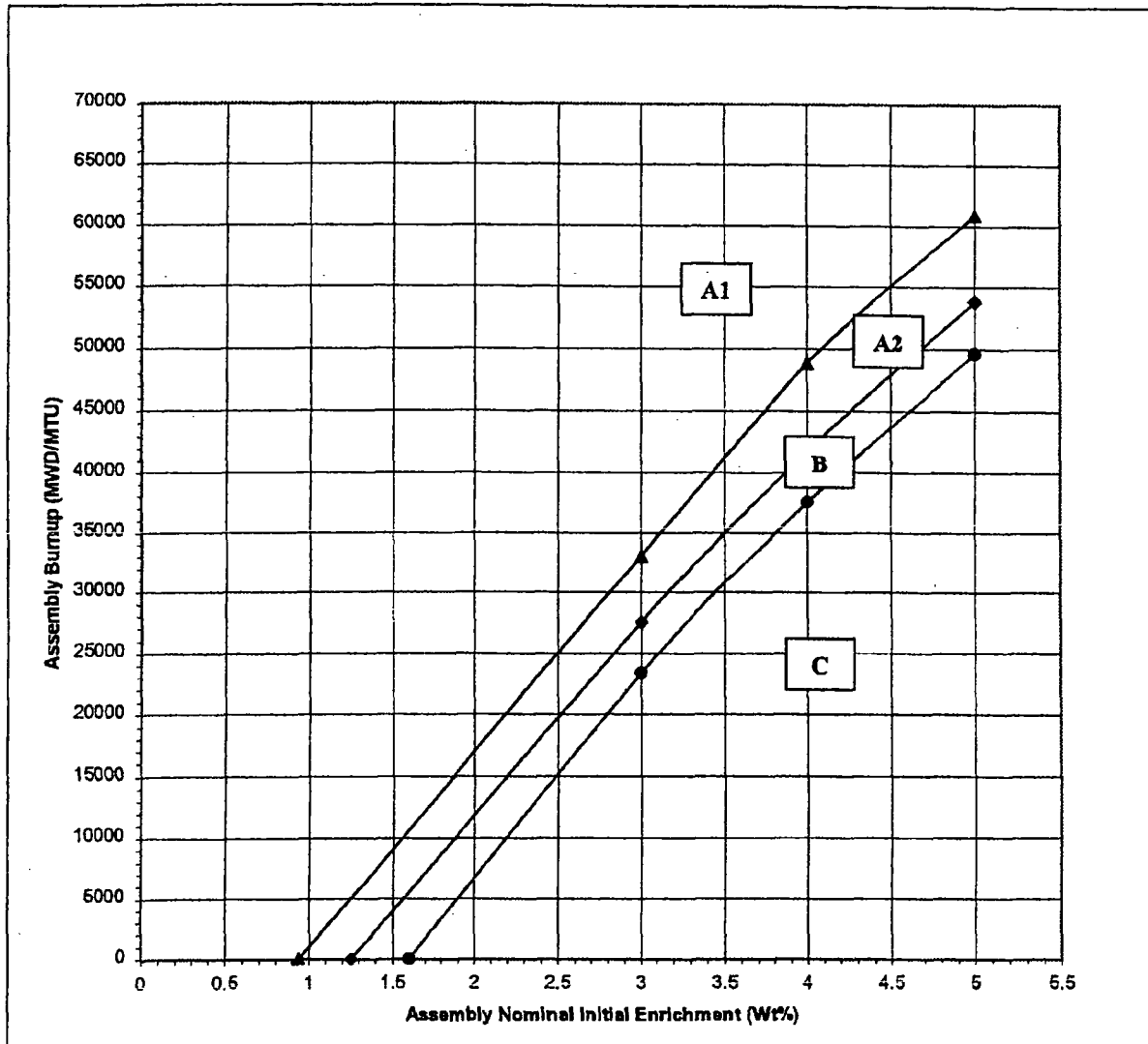
- A1** Acceptable burnup domain for storage in any location within Region 2 Type 1 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 1 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 1 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 1 Cells

Figure 3.7.13-2  
Burnup Vs Enrichment Curves for Region 2 Type 1 Cells (No Pu-241 Decay)



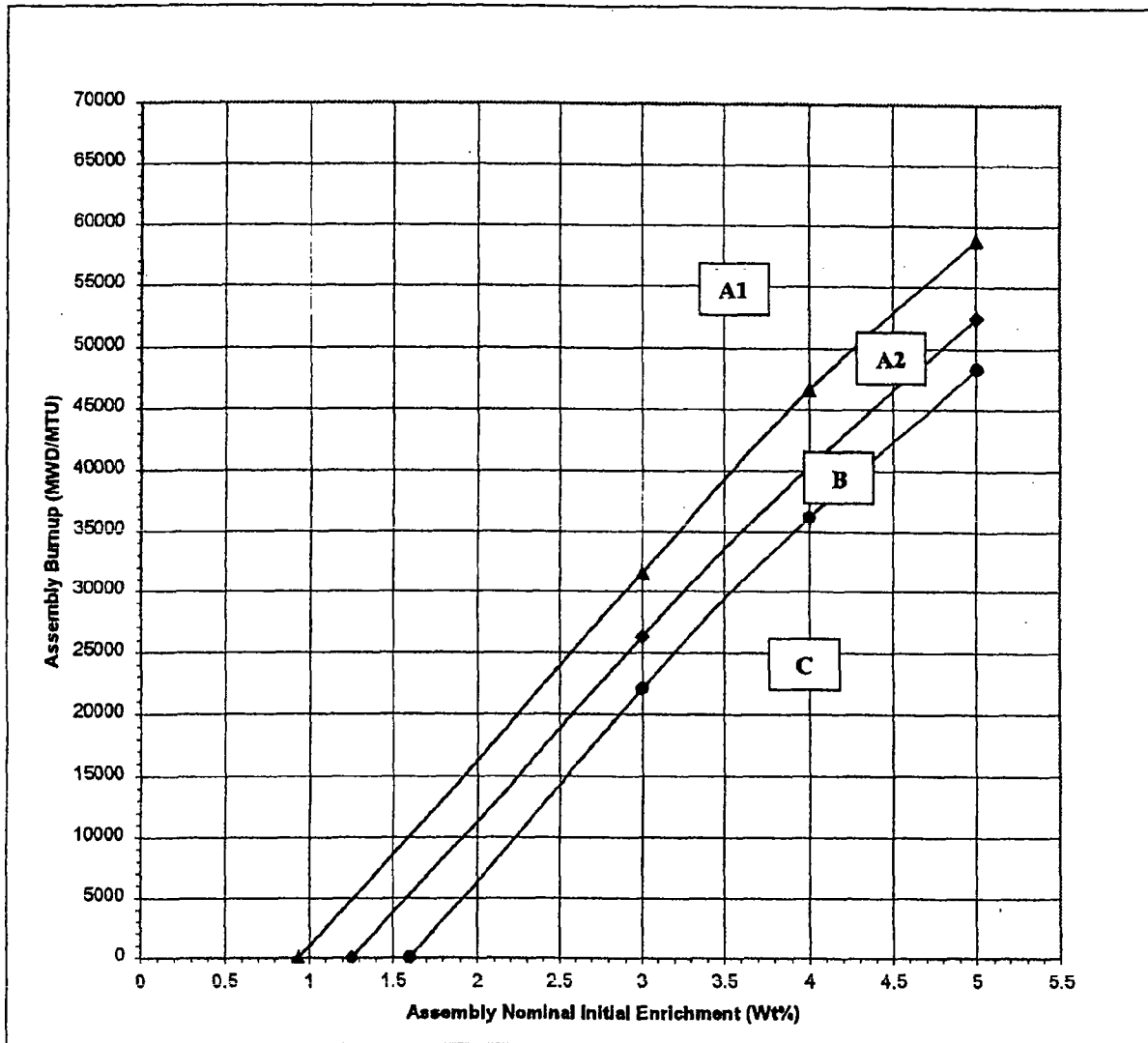
- A1** Acceptable burnup domain for storage in any location within Region 2 Type 1 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 1 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 1 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 1 Cells

Figure 3.7.13-3  
Burnup Vs Enrichment Curves for Region 2 Type 1 Cells (5-Year Pu-241 Decay)



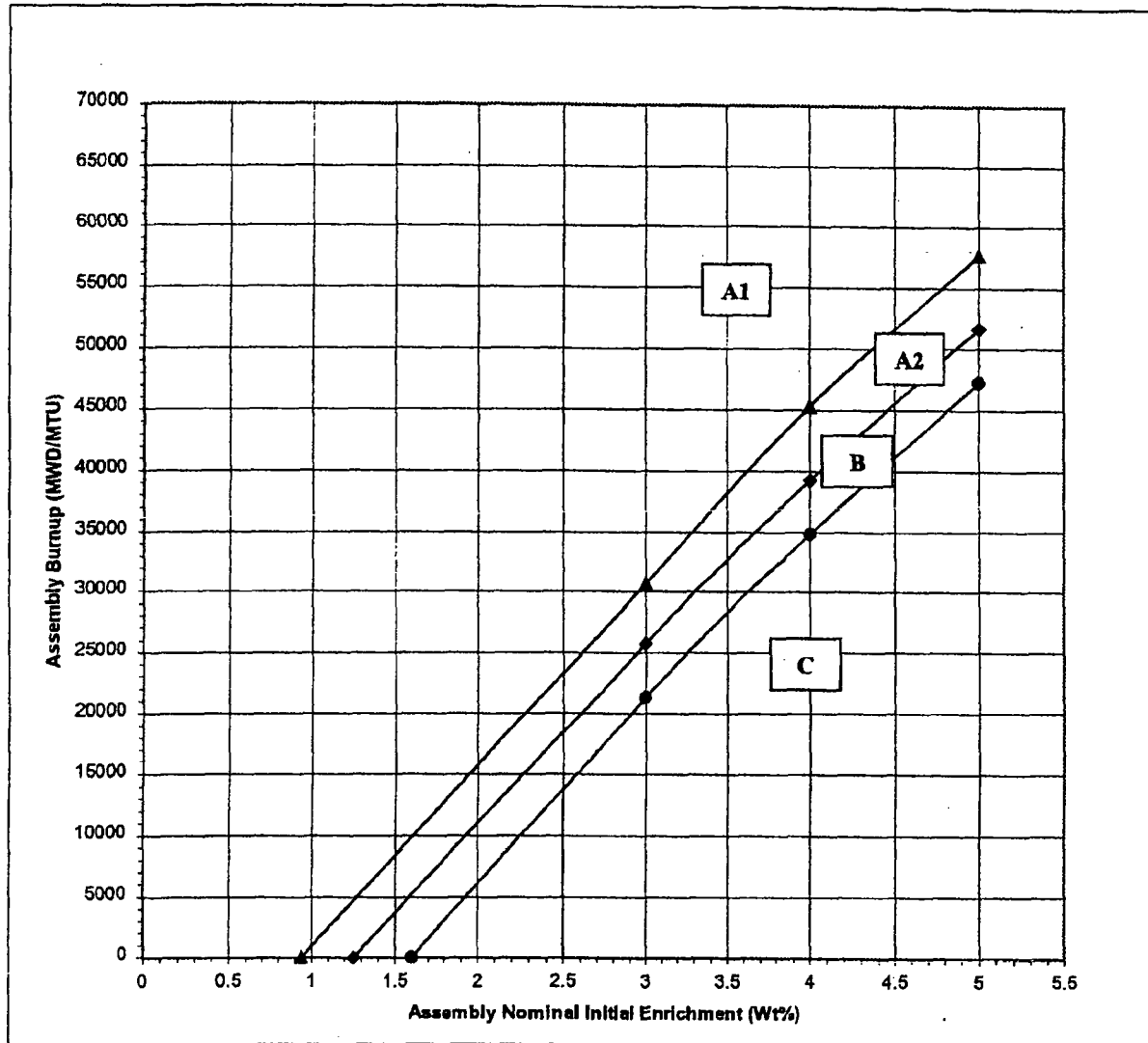
- A1** Acceptable burnup domain for storage in any location within Region 2 Type 1 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 1 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 1 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 1 Cells

Figure 3.7.13-4  
Burnup Vs Enrichment Curves for Region 2 Type 1 Cells (10-Year Pu-241 Decay)



- A1** Acceptable burnup domain for storage in any location within Region 2 Type 1 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 1 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 1 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 1 Cells

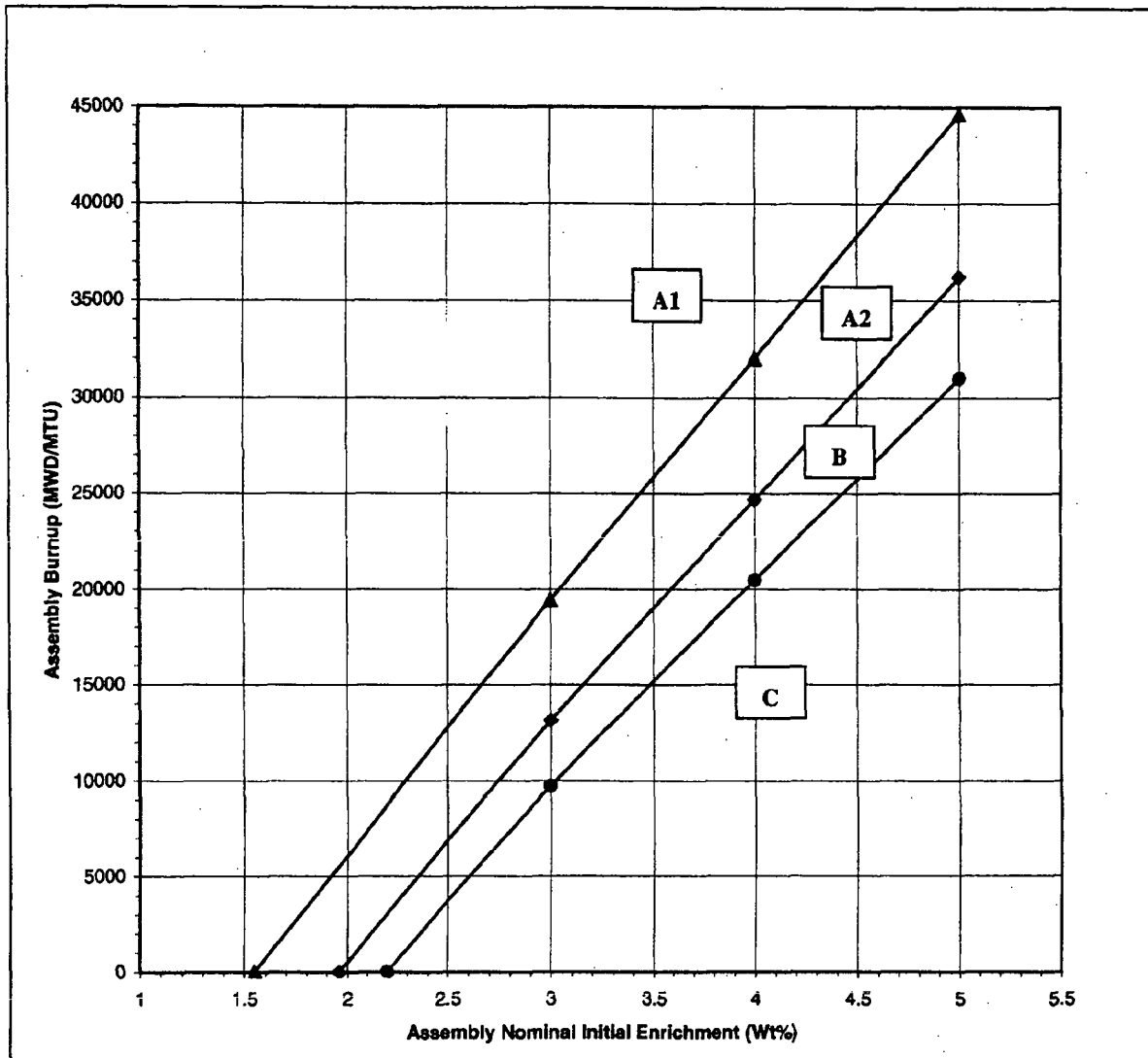
Figure 3.7.13-5  
Burnup Vs Enrichment Curves for Region 2 Type 1 Cells (15-Year Pu-241 Decay)



- A1** Acceptable burnup domain for storage in any location within Region 2 Type 1 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 1 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 1 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 1 Cells

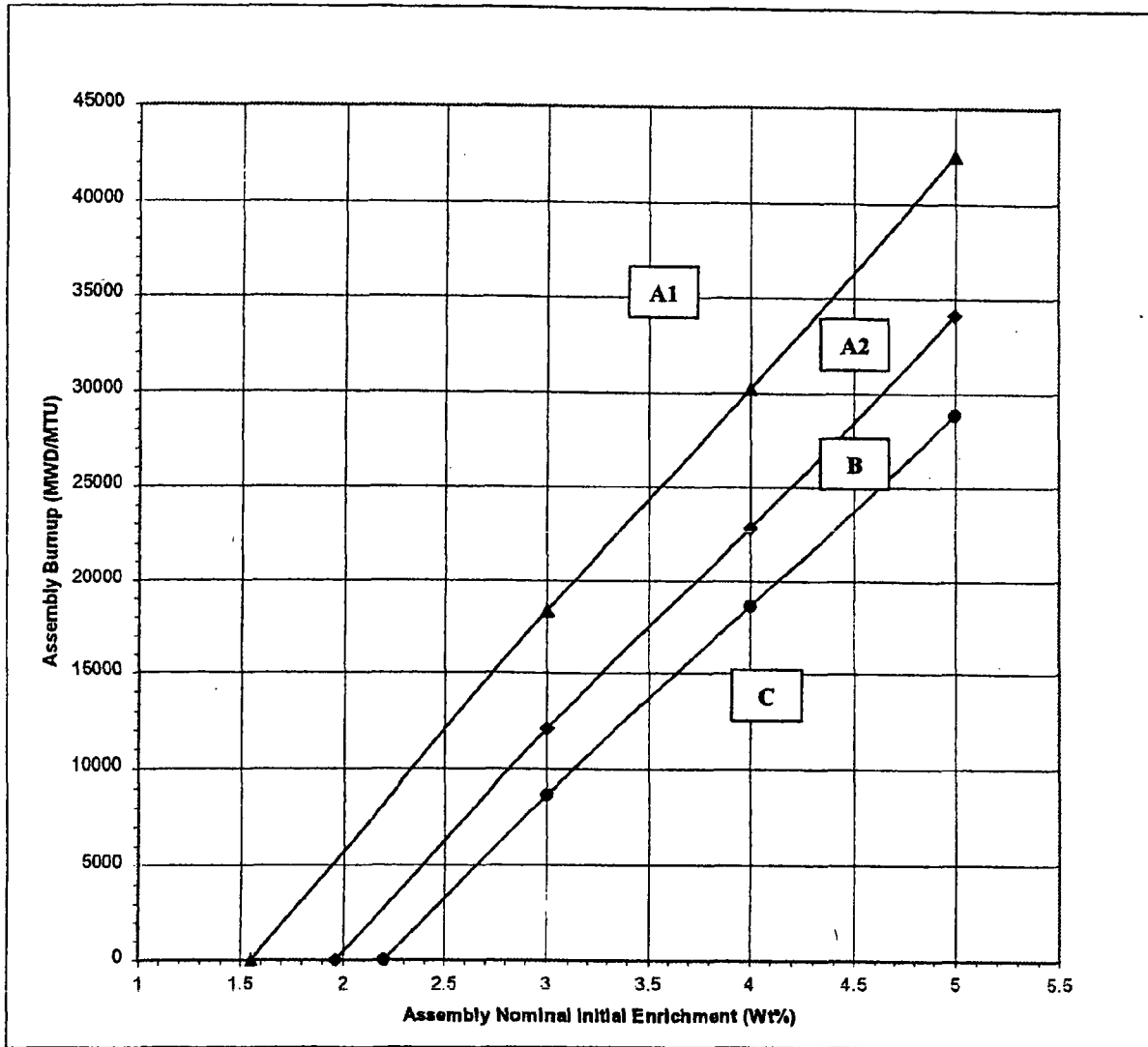
Figure 3.7.13-6  
Burnup Vs Enrichment Curves for Region 2 Type 1 Cells (20-Year Pu-241 Decay)





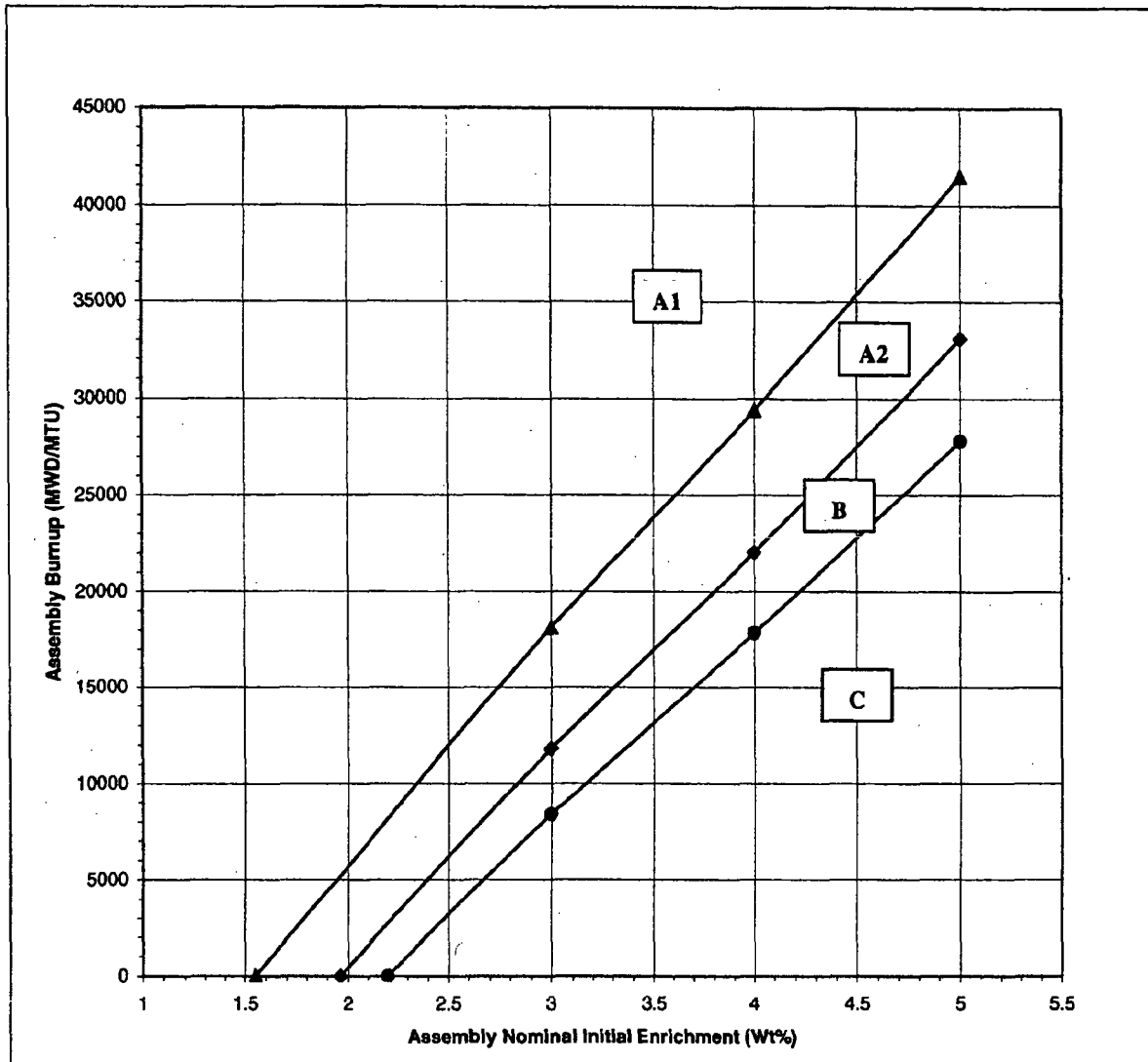
- A1** Acceptable burnup domain for storage in any location within Region 2 Type 2 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 2 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 2 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 2 Cells

Figure 3.7.13-7  
Burnup Vs Enrichment Curves for Region 2 Type 2 Cells (No Pu-241 Decay)



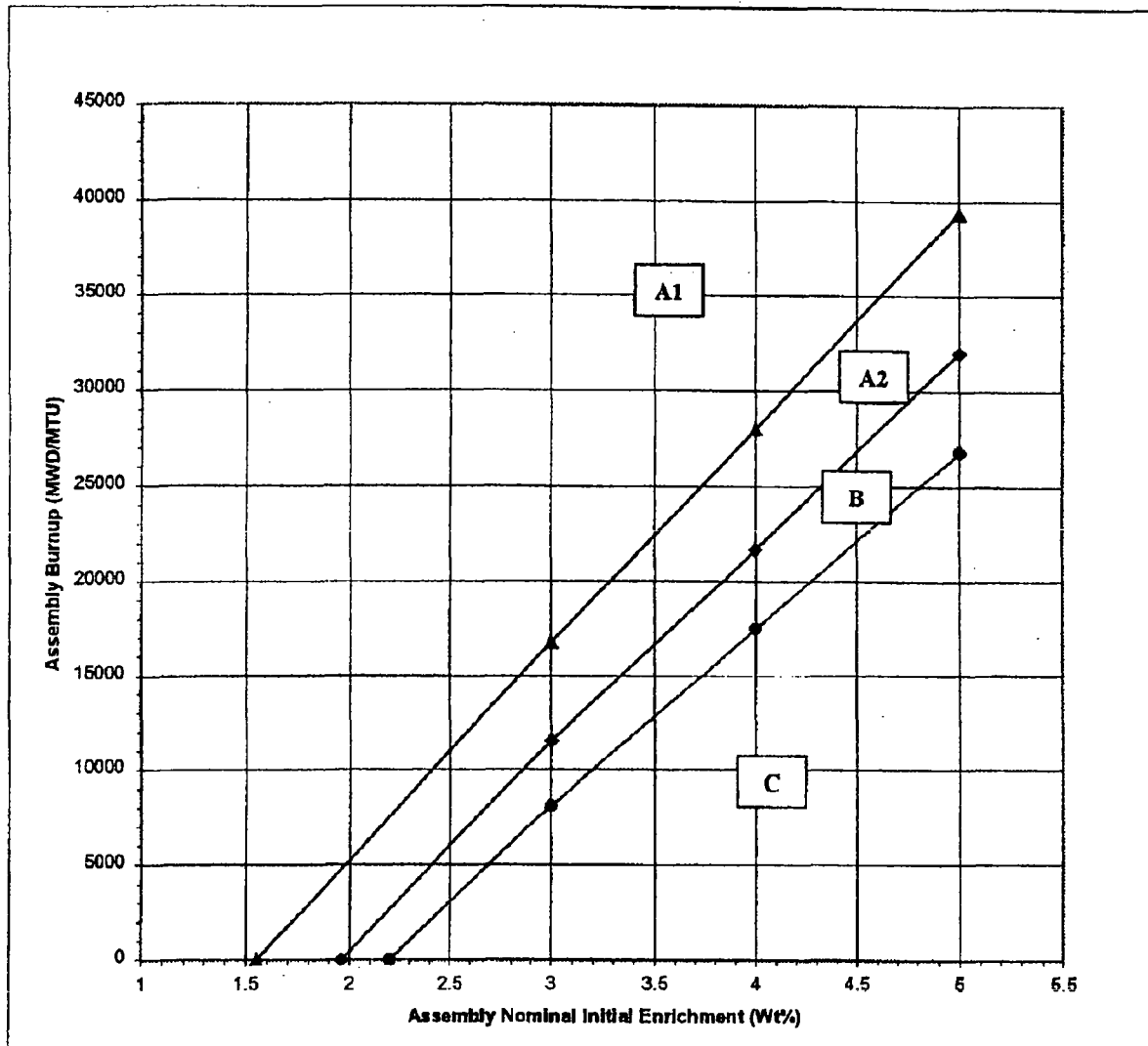
- A1** Acceptable burnup domain for storage in any location within Region 2 Type 2 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 2 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 2 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 2 Cells

Figure 3.7.13-8  
Burnup Vs Enrichment Curves for Region 2 Type 2 Cells (5-Year Pu-241 Decay)



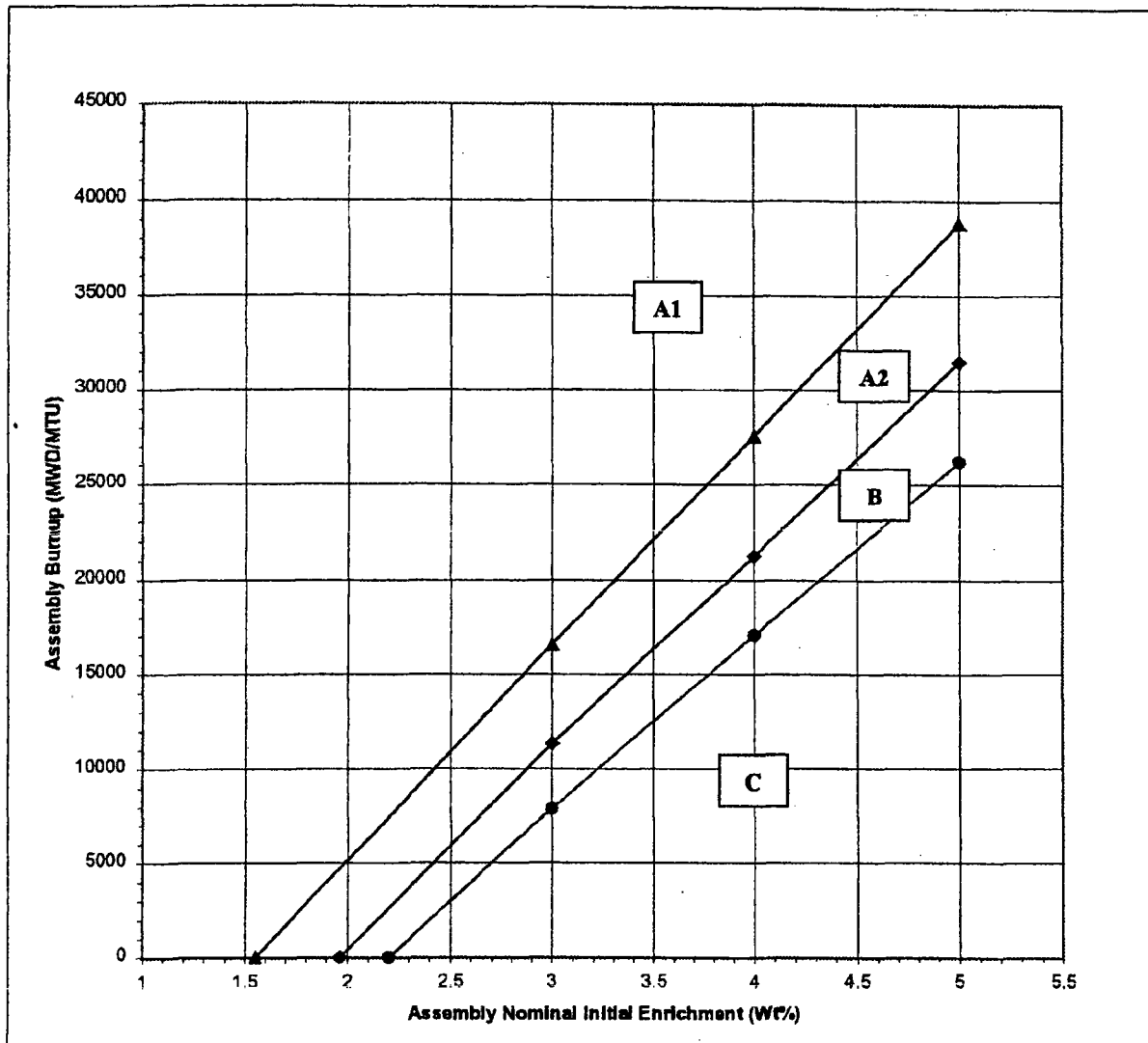
- A1** Acceptable burnup domain for storage in any location within Region 2 Type 2 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 2 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 2 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2-Type 2 Cells

Figure 3.7.13-9  
Burnup Vs Enrichment Curves for Region 2 Type 2 Cells (10-Year Pu-241 Decay)



- A1 Acceptable burnup domain for storage in any location within Region 2 Type 2 Cells
- A2 Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 2 Cells
- B Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 2 Cells
- C Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 2 Cells

Figure 3.7.13-10  
Burnup Vs Enrichment Curves for Region 2 Type 2 Cells (15-Year Pu-241 Decay)



- A1** Acceptable burnup domain for storage in any location within Region 2 Type 2 Cells
- A2** Acceptable burnup domain for storage face-adjacent to a Type A1 or A2 assembly, or a water cell within Region 2 Type 2 Cells
- B** Acceptable burnup domain for storage face-adjacent to a Type A1 assembly, or a water cell within Region 2 Type 2 Cells
- C** Acceptable burnup domain for storage face-adjacent to a water cell only, within Region 2 Type 2 Cells

Figure 3.7.13-11  
Burnup Vs Enrichment Curves for Region 2 Type 2 Cells (20-Year Pu-241 Decay)

## 4.0 DESIGN FEATURES

### 4.3 Fuel Storage

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#### 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 nominal U-235 enrichment of 5.0 weight percent;
- b.  $k_{\text{eff}} < 1.0$  if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR;
- c.  $k_{\text{eff}} \leq 0.95$  if fully flooded with water borated to  $\geq 975$  ppm, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and
- d. Consolidated rod storage canisters may be stored in the spent fuel storage racks provided that the fuel assemblies from which the rods were removed meet all the requirements of LCO 3.7.13 for the region in which the canister is to be stored. The average decay heat of the fuel assembly from which the rods were removed for all consolidated fuel assemblies must also be  $\leq 2150$  BTU/hr.

4.3.1.2 The new fuel storage dry racks are designed and shall be maintained with:

- a. Fuel assemblies having a maximum nominal U-235 enrichment of 5.0 weight percent;
- b.  $k_{\text{eff}} \leq 0.95$  if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and
- c.  $k_{\text{eff}} \leq 0.98$  if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR.

4.3.2

Drainage

The spent fuel pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 257'0" (mean sea level).

4.3.3

Capacity

The spent fuel pool is designed and shall be maintained with a storage capacity limited to no more than 1321 fuel assemblies.

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