LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

LIST OF FIGURES (Continued)

3/4.9.11 SPENT FUEL STORAGE POOL

LIMITING CONDITION FOR OPERATION

3.9.11 The Spent Fuel Storage Pool shall be maintained with:

a. The fuel storage pool water level greater than or equal to 23 ft over the top of irradiated fuel assemblies seated in the storage racks, and

b. The fuel storage pool boron concentration greater than or equal to 1720 ppm.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel storage pool.

ACTION:

a. With the water level requirement not satisfied, immediately suspend all movement of fuel assemblies and crane operations with loads in the fuel storage areas and restore the water level to within its limit within 4 hours.

b. With the boron concentration requirement not satisfied, immediately suspend all movement of fuel assemblies in the fuel storage pool and initiate action to restore fuel storage pool boron concentration to within the required limit.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11 The water level in the spent fuel storage pool shall be determined to be at least its minimum required depth at least once per 7 days when irradiated fuel assemblies are in the fuel storage pool.

4.9.11.1 Verify the fuel storage pool boron concentration is within limit at least once per 7 days.

3/4.9.10 and 3/4.9.11 WATER LEVEL-REACTOR VESSEL and SPENT FUEL STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

The limit on soluble boron concentration in LCO 3/4.9.11 is consistent with the minimum boron concentration specified for the RWT, and assures an additional subcritical margin to the value of k_{eff} which is calculated in the spent fuel storage pool criticality safety analysis to satisfy the acceptance criteria of Specification 5.6.1. Inadvertent dilution of the spent fuel storage pool by the quantity of unborated water necessary to reduce the pool boron concentration to a value that would invalidate the criticality safety analysis is not considered to be a credible event. The surveillance frequency specified for verifying the boron concentration is consistent with NUREG-1432 and satisfies, in part, acceptance criteria established by the NRC staff for approval of criticality safety analysis methods that take credit for soluble boron in the pool water. The ACTIONS required for this LCO are designed to preclude an accident from happening or to mitigate the consequences of an accident in progress, and shall not preclude moving a fuel assembly to a safe position.

3/4.9.12 SPENT FUEL CASK CRANE

The maximum load which may be handled by the spent fuel cask crane is limited to a loaded multi-element cask which is equivalent to approximately 100 tons. This restriction is provided to ensure the structural integrity of the spent fuel pool in the event of a dropped cask accident. Structural damage caused by dropping a load in excess of a loaded multi-element cask could cause leakage from the spent fuel pool in excess of the maximum makeup capability.

VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is 10,931 ± 275 cubic feet at a nominal T_{avg} of 572° F.

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.

5.6 FUEL STORAGE

CRITICALITY

5.6.1 a. The spent fuel pool and spent fuel storage racks shall be maintained with:

1. A k_{eff} equivalent to less than 1.0 when flooded with unborated water, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.

2. A k_{eff} equivalent to less than or equal to 0.95 when flooded with water containing 520 ppm boron, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.

3. A nominal 8.96 inch center-to-center distance between fuel assemblies placed in the storage racks.

5.6.1 b. Fuel placed in Region I of the spent fuel storage racks shall be stored in a configuration that will assure compliance with 5.6.1 a.1 and 5.6.1 a.2, above, with the following considerations:

1. Fresh fuel shall have a nominal average U-235 enrichment of less than or equal to 4.5 weight percent.

2. The reactivity effect of CEAs placed in fuel assemblies may be considered.

3. The reactivity equivalencing effects of burnable absorbers may be considered.

4. The reactivity effects of fuel assembly burnup and decay time may be considered as specified in Figures 5.6-1c through 5.6-1e.

5.6.1 c. Fuel placed in Region II of the spent fuel storage racks shall be placed in a configuration that will assure compliance with 5.6.1 a.1 and 5.6.1 a.2, above, with the following considerations:

1. Fuel placed in Region II shall meet the burnup and decay time requirements specified in Figure 5.6-1a or 5.6-1b.

2. The reactivity effect of CEAs placed in fuel assemblies may be considered.

3. The reactivity equivalencing effects of burnable absorbers may be considered.

CRITICALITY (continued)

5.6.1 d. The new fuel storage racks are designed for dry storage of unirradiated fuel assemblies having a U-235 enrichment less than or equal to 4.5 weight percent, while maintaining a k_{eff} of less than or equal to 0.98 under the most reactive condition.

DRAINAGE

5.6.2 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 56 feet.

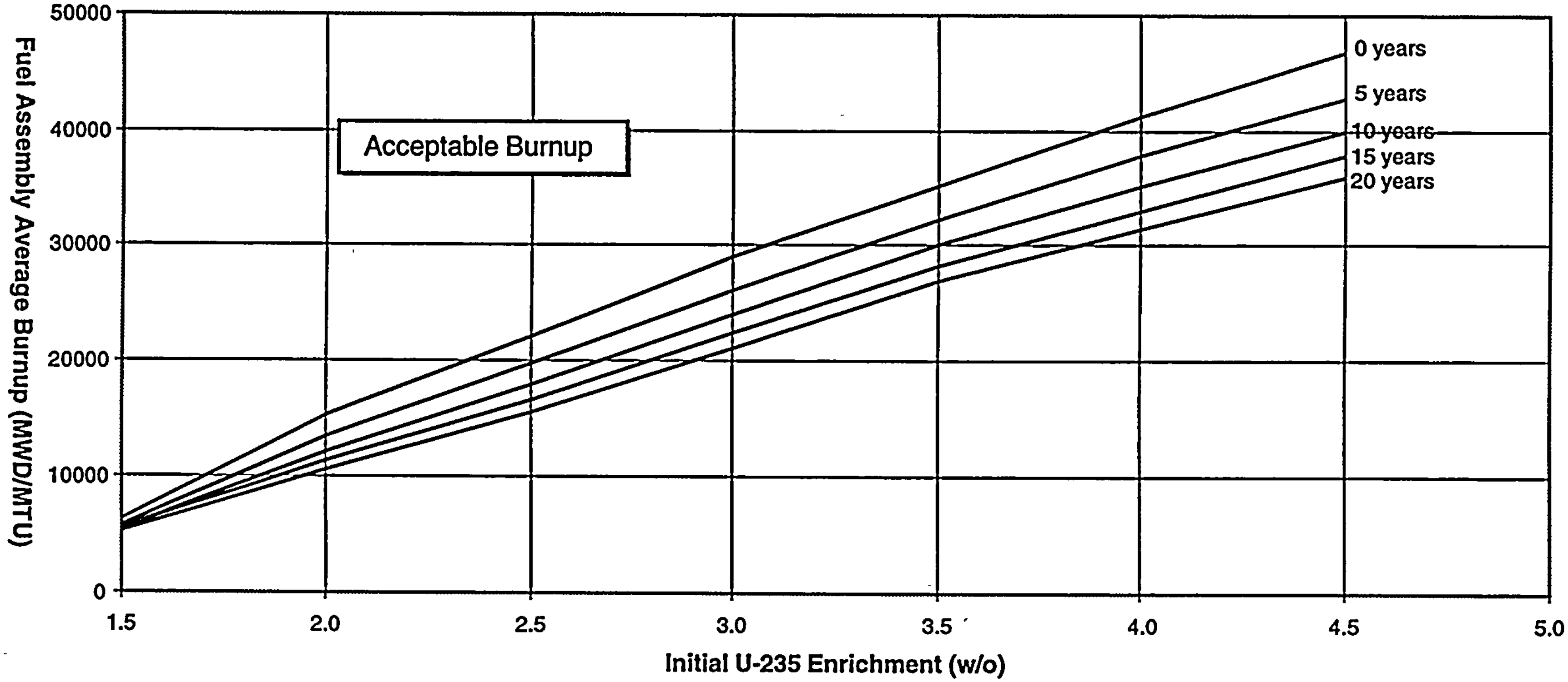
CAPACITY

5.6.3 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1360 fuel assemblies.

5.7 COMPONENT CYCLIC OR TRANSIENT LIMITS

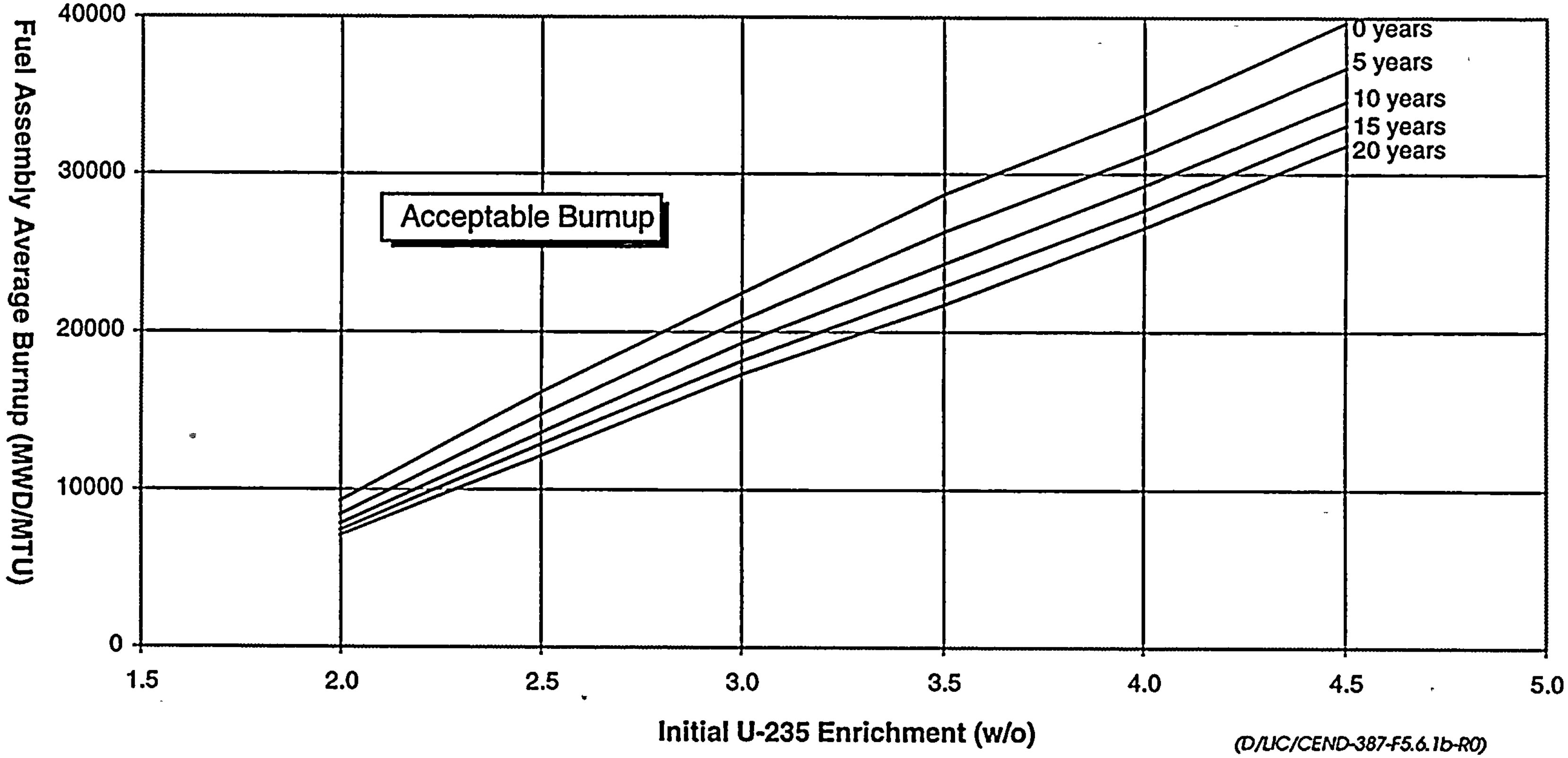
5.7.1 The components identified in Table 5.7-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.7-1.

Figure 5.6-1a
Required Fuel Assembly Burnup vs Initial Enrichment and Decay Time
Region II, 1.3 w/o



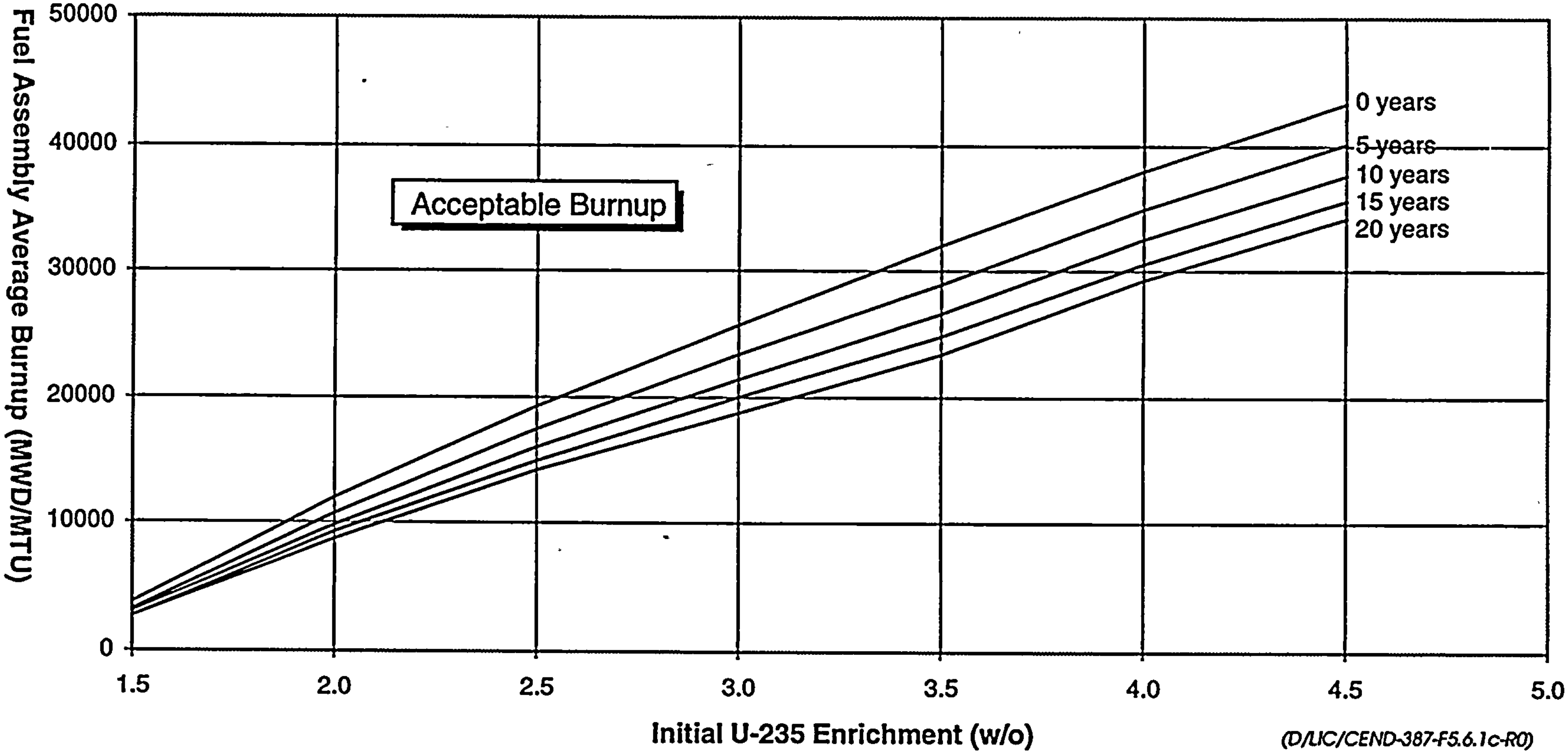
(D/LIC/CEND-387-F5.6.1a-R0)

Figure 5.6-1b
Required Fuel Assembly Burnup vs Initial Enrichment and Decay Time
Region II, 1.5 w/o



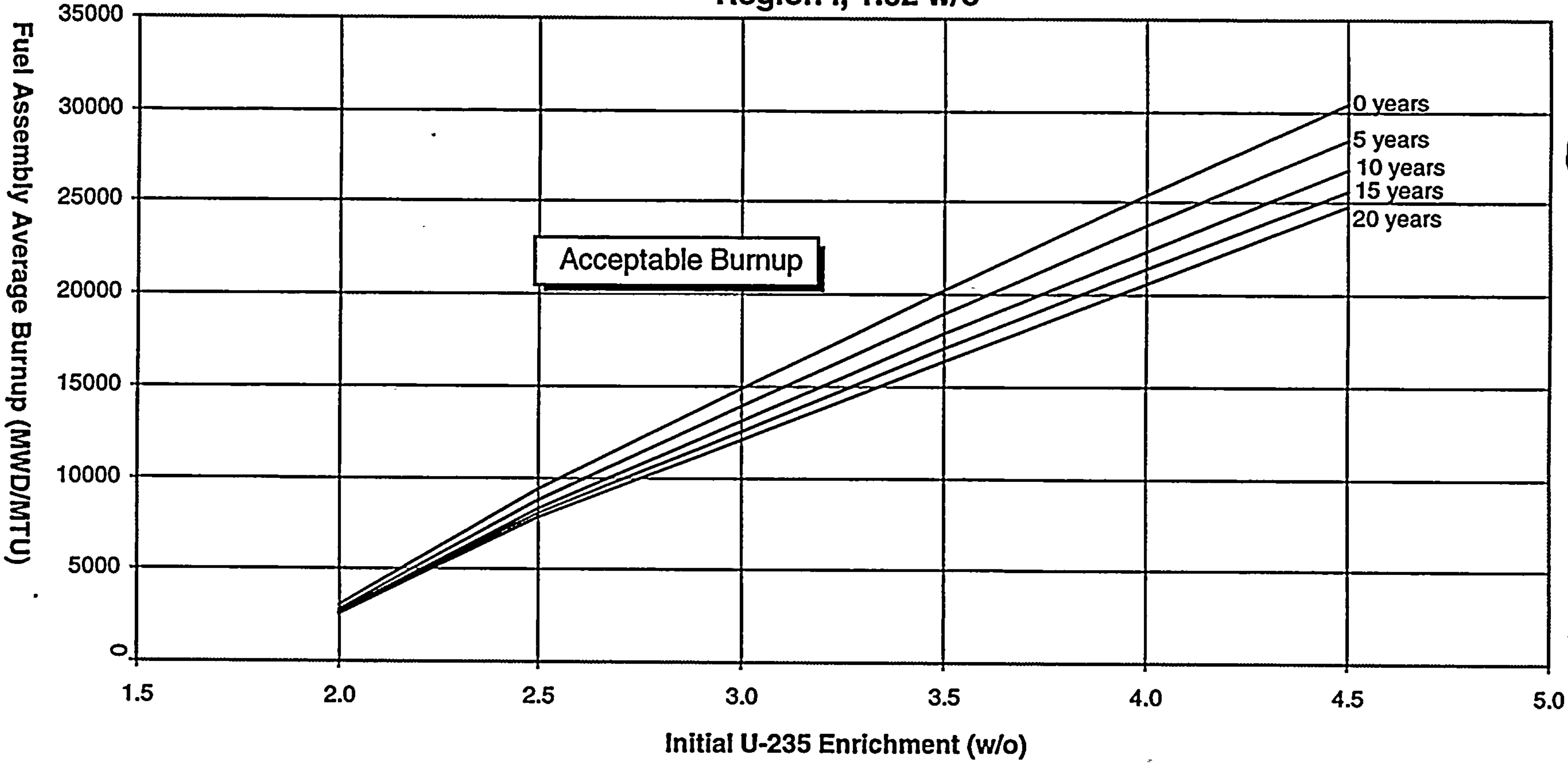
(D/LIC/CEND-387-F5.6.1b-R0)

Figure 5.6-1c
Required Fuel Assembly Burnup vs Initial Enrichment and Decay Time
Region I, 1.4 w/o



(D/LIC/CEND-387-F5.6.1c-R0)

Figure 5.6-1d
Required Fuel Assembly Burnup vs Initial Enrichment and Decay Time
Region I, 1.82 w/o



(D/LIC/CEND-387-F5.6.1d-R0)

Figure 5.6-1e
Required Fuel Assembly Burnup vs Initial Enrichment
Region I, 2.82 w/o