

Enclosure 5 to Serial: HNP-98-188

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
SPENT FUEL STORAGE

TECHNICAL SPECIFICATION PAGES

9812290058 981223
PDR ADCK 05000400
P PDR

BEFORE

DESIGN FEATURES

5.6 FUEL STORAGE

CRITICALITY

5.6.1.a The spent fuel storage racks are designed and shall be maintained with a k_{eff} less than or equal to 0.95 when flooded with unborated water, which includes an allowance for uncertainties as described in Section 4.3.2.6 of the FSAR. This is assured by maintaining:

1. A nominal 10.5 inch center-to-center distance between fuel assemblies placed in the PWR storage racks and 6.25 inch center-to-center distance in the BWR storage racks.
2. The maximum core geometry K_{∞} for PWR fuel assemblies less than or equal to 1.470 at 68°F.

5.6.1.b The k_{eff} for new fuel for the first core loading stored dry in the spent fuel storage racks shall not exceed 0.98 when aqueous foam moderation is assumed.

DRAINAGE

5.6.2 The new and spent fuel storage pools are designed and shall be maintained to prevent inadvertent draining of the pools below elevation 277.

CAPACITY

5.6.3 The new and spent fuel storage pools are designed for a storage capacity of 1832 PWR fuel assemblies and a variable number of PWR and BWR storage spaces in 48 interchangeable 7x7 PWR and 11x11 BWR racks. These interchangeable racks will be installed as needed. Any combination of BWR and PWR racks may be used.

5.7 COMPONENT CYCLIC OR TRANSIENT LIMIT

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.

DESIGN FEATURES

5.6 FUEL STORAGE

CRITICALITY

5.6.1 The spent fuel storage racks are designed and shall be maintained with a k_{eff} less than or equal to 0.95 when flooded with unborated water, which includes an allowance for uncertainties as described in Section 4.3.2.6 of the FSAR.

1. The reactivity margin is assured for pools 'A' and 'B' by maintaining a nominal 10.5 inch center-to-center distance between fuel assemblies placed in the flux trap style PWR storage racks and 6.25 inch center-to-center distance in the BWR storage racks.
2. The reactivity margin is assured for pools 'C' and 'D' by maintaining a nominal 9.017 inch center-to-center distance between fuel assemblies placed in the non-flux trap style PWR storage racks and 6.25 inch center-to-center distance in the BWR storage racks. The following restrictions are also imposed through administrative controls:
 - a. PWR assemblies must be within the "acceptable range" of the burnup restrictions shown in Figure 5.6.1 prior to storage in Pools 'C' or 'D'
 - b. BWR assemblies are acceptable for storage in Pool 'C' provided that the maximum planar average enrichments is less than 4.6 wt% U235 and K_{inf} is less than or equal to 1.32 for the standard cold core geometry (SCCG).

DRAINAGE

5.6.2 The pools 'A', 'B', 'C' and 'D' are designed and shall be maintained to prevent inadvertent draining of the pools below elevation 277.

CAPACITY

5.6.3.a Pool 'A' contains six (6 x 10 cell) flux trap type PWR racks and three (11 x 11 cell) BWR racks for a total storage capacity of 723 assemblies. Pool 'B' contains six (7 x 10 cell), five (6 x 10 cell), and one (6 x 8 cell) flux trap style PWR racks and seventeen (11 x 11 cell) BWR racks and is licensed for one additional (11 x 11 cell) BWR rack that will be installed as needed. The combined pool 'A' and 'B' licensed storage capacity is 3669 assemblies.

5.6.3.b Pool 'C' is designed to contain a combination of PWR and BWR assemblies. Pool 'C' can contain two (11 x 9 cell) and nine (9 x 9 cell) PWR racks for storage of 927 PWR assemblies. Pool 'C' can contain two (8 x 13 cell), two (8 x 11 cell), six (13 x 11 cell), and nine (13 x 13 cell) BWR racks for storage of 2763 BWR assemblies. The (9 x 9 cell) PWR racks and the (13 x 13 cell) BWR racks are dimensioned to allow interchangeability between PWR or BWR storage rack styles as required. The racks in pool 'C' will be installed as needed.

DESIGN FEATURES

5.6.3.c Pool 'D' contains a variable number of PWR storage spaces. These racks will be installed as needed. Pool 'D' is designed for a maximum storage capacity of 1025 PWR assemblies.

5.6.3.d The heat load from fuel stored in Pools 'C' and 'D' shall not exceed 1.0 MBtu/hr.

5.7 COMPONENT CYCLIC OR TRANSIENT LIMIT

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.

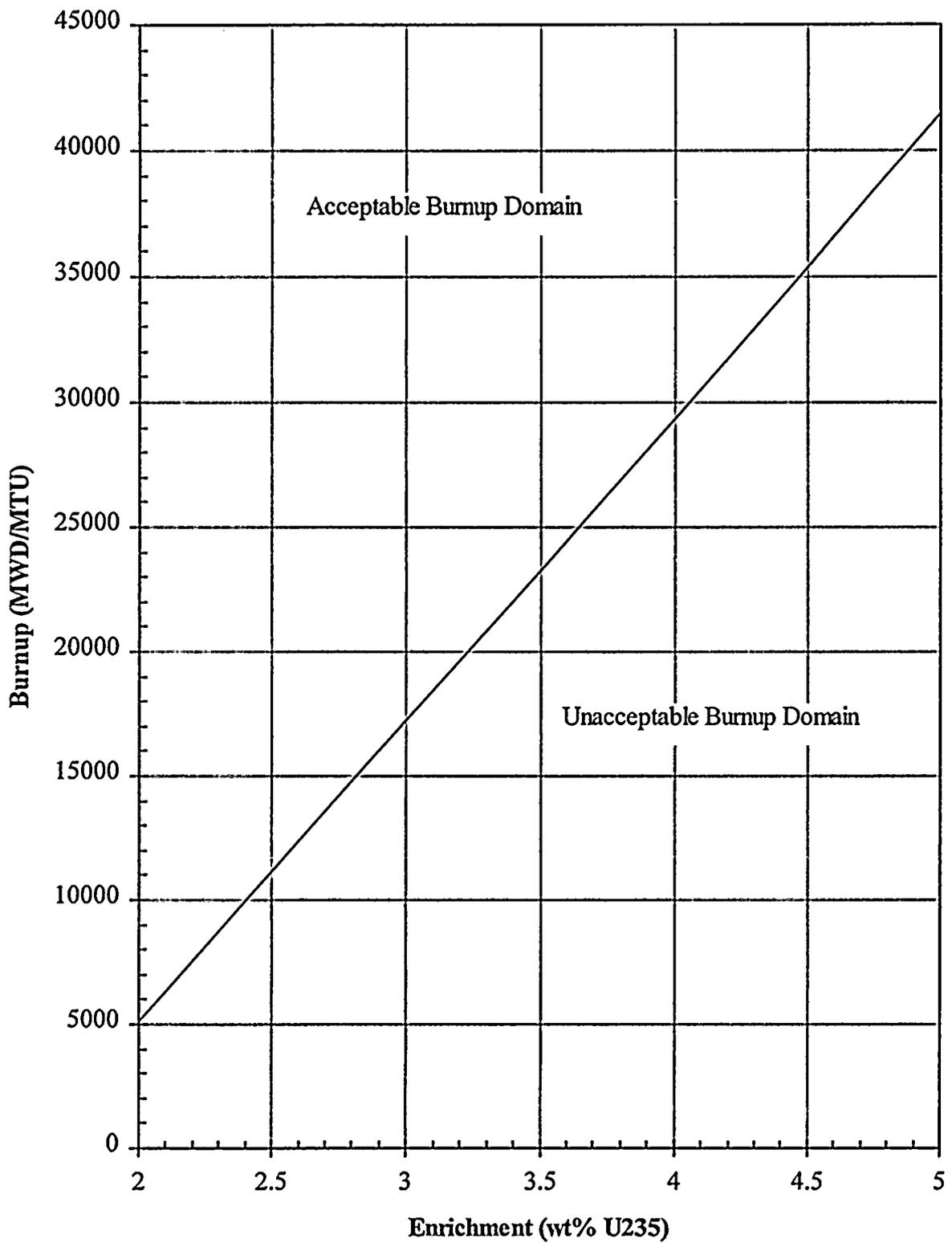


Figure 5.6.1: Burnup Versus Enrichment for PWR Fuel