

DESIGN FEATURES

DESIGN PRESSURE AND TEMPERATURE

5.2.2 The reactor containment building is designed and shall be maintained for a maximum internal pressure of 54 psig and a temperature of 300°F.

5.3 REACTOR CORE

FUEL ASSEMBLIES

5.3.1 The reactor core shall contain 177 fuel assemblies with each fuel assembly containing a maximum of 236 fuel rods clad with Zircaloy-4. Each fuel rod shall have a nominal active fuel length of 150 inches and contain a maximum total weight of 2114 grams uranium. The initial core loading shall have a maximum enrichment of 2.99 weight percent U-235. Reload fuel shall be similar in physical design to the initial core loading and shall have a maximum enrichment of 4.1 weight percent U-235.

CONTROL ELEMENT ASSEMBLIES

5.3.2 The reactor core shall contain 73 full length and 8 part length control element assemblies.

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

5.4.1 The reactor coolant system is designed and shall be maintained:

- a. In accordance with the code requirements specified in Section 5.2 of the FSAR with allowance for normal degradation pursuant of the applicable Surveillance Requirements,
- b. For a pressure of 2500 psia, and
- c. For a temperature of 650°F, except for the pressurizer which is 700°F.

SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The proposed amendment request does not involve a SHC because

(A) operation of Arkansas Nuclear One in accordance with this change would not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated; or
- 2) introduce the possibility of a previously unanalyzed accident; or
- 3) involve a significant reduction in a margin of safety; and

(B) the proposed amendment matches the example(s) checked below: (ref: DLOP 288, Federal Register, Vol, 48, p. 14870).

Examples of amendments which does not involve SHC:

- ☒ (i) purely administrative change to technical specifications: for example, a change to achieve consistency throughout the technical specifications, correction of an error, or a change in nomenclature.
- ☐ (ii) A change that constitutes an additional limitation, restriction or control not presently included in the technical specifications: for example, a more stringent surveillance requirement.
- ☐ (iii) For a nuclear power reactor, a change resulting from a nuclear reactor core reloading, if no fuel assemblies significantly different from those found previously acceptable to the NRC for a previous core at the facility in question are involved. This assumes that no significant changes are made to the acceptance criteria for the technical specifications, that the analytical methods used to demonstrate conformance with the technical specifications and regulations are not significantly changed, and that NRC has previously found such methods acceptable.
- ☐ (iv) A relief granted upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation was not yet demonstrated. This assumes that the operating restriction and the criteria to be applied to a request for relief have been established in a prior review and that it is justified in a satisfactory way that the criteria have been met.
- ☐ (v) Upon satisfactory completion of construction in connection with an operating facility, a relief granted from an operating restriction that was not yet completed satisfactorily. This is intended to involve only restrictions where it is justified that construction has been completed satisfactorily.

- (vi) A change which either may result in some increase to the probability or consequences of a previously-analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan: for example, a change resulting from the application of a small refinement of a previously used calculation model or design method.
- (vii) A change to a license to reflect a minor adjustment in ownership shares among co-owners already shown in the license.

BASIS: We have determined that this change is administrative in nature as it specifies a design parameter (contained in Section 5 of the Technical Specifications, "Design Features") and thus does not, in itself affect a Limiting Condition for Operation or a safety analysis. This change will not permit operation with the higher enriched fuel; however, it will specify an upper boundary for an input to the reload analyses for reload fuel cycles. For each cycle, an analyses is required and either submittal and NRC approval of a Reload Report or review under the provisions of 10CFR50.59 would be required prior to using fuel for this cycle.