DUKE POWER COMPANY
OCONEE NUCLEAR STATION

Attachment 1
Proposed Technical Specification Revision

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5.3 REACTOR

Specification

5.3.1 Reactor Core

5.3.1.1 The reactor core contains approximately 93 metric tons of slightly enriched uranium dioxide pellets. The pellets are encapsulated in Zircaloy-4 tubing to form fuel rods. The reactor core is made up of 177 fuel assemblies, all of which are prepressurized with Helium. (1)

5.3.1.2 The fuel assemblies shall form an essentially cylindrical lattice with an active height of 142 in. and an equivalent diameter of 128.9 in. (2)

5.3.1.3 There are 61 full-length control rod assemblies (CRA) and 8 axial power shaping rod assemblies (APSR) distributed in the reactor core as shown in FSAR Figure 4.3-3. The full-length CRA and the APSR shall conform to the design described in the FSAR or reload report. (1)

5.3.1.4 Initial core and reload fuel assemblies and rods shall conform to design and evaluation described in the FSAR.

5.3.2 Reactor Coolant System

5.3.2.1 The design of the pressure components in the reactor coolant system shall be in accordance with the code requirements. (3)

5.3.2.2 The reactor coolant system and any connected auxiliary systems exposed to the reactor coolant conditions of temperature and pressure, shall be designed for a pressure of 2,500 psig and a temperature of 650°F. The pressurizer and pressurizer surge line shall be designed for a temperature of 670°F. (4)

5.3.2.3 The maximum reactor coolant system volume shall be 12,200 ft^3.

REFERENCES

(1) FSAR Section 4.2.2
(2) FSAR Section 4.3.1, and Table 4.3-1
(3) FSAR Section 5.2.3.1
(4) FSAR Section 5.2.1

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Attachment 2

Technical Justification

Attachment 2

Technical Justification

The proposed amendment would delete the specification that new fuel shall not exceed an enrichment of 3.5 percent U-235. The licensing basis safety analyses are not directly affected by the initial fuel enrichment. Changing the enrichment will affect the core physics parameters; however, variations in the physics parameters will be in accordance with reload design methodology previously accepted by the NRC. The enrichment of new fuel which will be stored in the spent fuel pool is limited by Technical Specification 3.8.15. That specification ensures that fuel in the pool will remain sufficiently subcritical under all possible conditions.

This proposed amendment also addresses an error in Sections 5.3.1.2. The active fuel assemblies height is 142 inches, not 144 inches. This change will correct that mistake and make the Technical Specifications consistent with Oconee's FSAR. This change is purely administrative in nature and is, therefore, of no significance with respect to the health and safety of the public.

In addition, this amendment will correct a typographical in Reference 2. Table 4.3.1 should be Table 4.3-1. This change is also purely administrative and is of no significance with respect to the health and safety of the public.

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Attachment 3

No Significant Hazards Consideration Evaluation

Attachment 3

No Significant Hazards Consideration Evaluation

Duke Power has made the determination that this amendment request poses no significant hazards as defined by NRC regulations in 10 CFR 50.92. This ensures that operation of the facility in accordance with the proposed amendment would not:

1) involve a significant increase in the probability or consequences of an accident previously evaluated; or

2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

3) involve a significant reduction in a margin of safety.

Deletion of the reference to initial fuel enrichment in Technical Specification (T.S.) 5.3.1.4 will not create a safety problem. The enrichment limit will no longer be specified in this T.S., but, will be specified by T.S. 3.8.15. All fuel that is inserted into the core must first go through the spent fuel pool. T.S. 3.8.15 limits the enrichment in the pool, which will in turn, limit the initial enrichment in the core.

It should also be noted that the fuel enrichment is not what assures the safe operation of the plant. This is done through various safety and operating limits throughout the T.S. For a given cycle, these safety and operating limits are established and verified acceptable to the appropriate criteria, in accordance with the NRC approved Reload Design Methodology for Oconee Nuclear Station. Specifically, T.S. 2.1 assures the fuel cladding integrity is maintained. T.S. 2.2 assures the reactor coolant system integrity is maintained and also prevents the release of significant amounts of fission product activity. T.S. 2.3 assures there is sufficient instrumentation to provide automatic protective action to prevent any combination of process variables from exceeding a safety limit. And, T.S. 3.5.2 assures an acceptable core power distribution during power operation and assures core subcriticality after a reactor trip.

Finally, the Oconee Reload Reports document the acceptance of key physics parameters to the appropriate criteria, the review of each FSAR accident analysis, and assures that the transient evaluation of the reload cycle is bounded by previously accepted analysis.

The following brief evaluation measures aspects of the present amendment request against the §50.92(c) requirements to demonstrate that all three standards are satisfied.

First Standard

(Amendment will not) involve a significant increase in the probability or consequences of an accident previously evaluated.

The probability or consequences of previously evaluated accident sequences are unaffected for the present amendment request because the enrichment specification itself is not being altered; only the T.S. reference is being deleted. The documented location of the fuel assembly and rod initial enrichment criteria does not affect previous analyses.

Second Standard

> (Amendment would not) create the possibility of a new or different kind of accident from any accident previously evaluated.

Deleting the T.S. reference to the specification of initial fuel enrichment does not, create the possibility of previously unevaluated accidents.

Third Standard

> (Amendment would not) involve a significant reduction in a margin of safety.

While actual increases in the enrichment level of selected fuel assemblies and/or fuel rods are capable of reducing certain safety margins, the current amendment request does not address the actual enrichment, but instead simply deletes the specification of the enrichment from T.S. 5.3.1.4. Any changes in assembly and rod enrichment would, of necessity, be included in the reload report accompanying the reload amendment request.

The above evaluation shows that the three §50.92(c) standards are satisfied. In summary, Duke has determined and submits that the proposed amendment described herein does not represent any significant hazards.