Progress Energy

James Scarola
Vice President
Brunswick Nuclear Plant
Progress Energy Carolinas, Inc.

JAN 2 2 2007

SERIAL: BSEP 06-0128
TSC-2006-05

10 CFR 50.90

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Docket Nos. 50-325 and 50-324/License Nos. DPR-71 and DPR-62
Request for License Amendments Regarding Fuel Design and Storage Requirements for AREVA NP Fuel

Ladies and Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., is requesting a revision to the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed license amendments revise: (1) Technical Specification 4.2.1, "Fuel Assemblies," to modify the fuel design description to encompass AREVA NP fuel assemblies, and (2) Technical Specification 4.3, "Fuel Storage," to remove nomenclature specific to Global Nuclear Fuels fuel storage criticality analysis methods. An evaluation of the proposed license amendments is provided in Enclosure 1.

CP&L has evaluated the proposed changes in accordance with 10 CFR 50.91(a)(1), using the criteria in 10 CFR 50.92(c), and determined that these changes involve no significant hazards considerations.

CP&L is providing, in accordance with 10 CFR 50.91(b), a copy of the proposed license amendments to the designated representative for the State of North Carolina.

CP&L plans to begin receiving AREVA NP fuel on December 4, 2007; therefore, NRC approval of the proposed amendments is requested by November 1, 2007, and once approved, the amendments shall be implemented within 30 days following issuance.

There are no regulatory commitments associated with this submittal. Please refer any questions regarding this submittal to Mr. Randy C. Ivey, Manager - Support Services, at (910) 457-2447.

P.O. Box 10429
Southport, NC 28461

T> 910.457.3698
F> 910.457.2803

A001

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on January 22, 2007.

Sincerely,

James Scarola

James Scarola

WRM/wrm

Enclosures:

1. Evaluation of License Amendment Requests
2. Marked-up Technical Specification Pages - Unit 1
3. Typed Technical Specification Pages - Unit 1
4. Typed Technical Specification Pages - Unit 2

cc (with enclosures):

U. S. Nuclear Regulatory Commission, Region II
ATTN: Dr. William D. Travers, Regional Administrator
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-8931

U. S. Nuclear Regulatory Commission
ATTN: Mr. Eugene M. DiPaolo, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission **(Electronic Copy Only)**
ATTN: Mr. Stewart N. Bailey (Mail Stop OWFN 8B1)
11555 Rockville Pike
Rockville, MD 20852-2738

Ms. Jo A. Sanford
Chair - North Carolina Utilities Commission
P.O. Box 29510
Raleigh, NC 27626-0510

Ms. Beverly O. Hall, Section Chief
Radiation Protection Section, Division of Environmental Health
North Carolina Department of Environment and Natural Resources
3825 Barrett Drive
Raleigh, NC 27609-7221

Evaluation of Proposed License Amendment Requests

Subject: Request for License Amendments Regarding Fuel Design and Storage Requirements for AREVA NP Fuel

1.0 Description

This letter is a request to amend the Technical Specifications of Renewed Operating Licenses DPR-71 and DPR-62 for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.

The proposed license amendments will revise: (1) Technical Specification 4.2.1, "Fuel Assemblies," to modify the fuel design description to encompass AREVA NP fuel assemblies, and (2) Technical Specification 4.3, "Fuel Storage," to remove nomenclature specific to Global Nuclear Fuels, Americas (GNF-A) fuel storage criticality analysis methods. These proposed Technical Specification changes are needed to support the transition to using AREVA NP fuel. CP&L is planning to begin using AREVA NP fuel starting with the BSEP, Unit 1 refueling outage scheduled for March 2008 and the BSEP, Unit 2 refueling outage scheduled for February 2009.

2.0 Proposed Changes

Fuel Design Description

Technical Specification 4.2.1, "Fuel Assemblies," is being revised to provide a description that is compatible with both the AREVA NP ATRIUM™-10 and GNF-A fuel assemblies. The specific change to Technical Specification 4.2.1 is shown in bold typeface.

4.2.1 Fuel Assemblies

The reactor shall contain 560 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material, gadolinia rods, water rods **or channels**, and a surrounding channel. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with NRC staff approved codes and methods and have been shown by tests or analyses to comply with all safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in non-limiting core regions.

Stored Fuel Analysis Methods

Technical Specification 4.3.1 is being revised to eliminate Technical Specification 4.3.1.1.b and Technical Specification 4.3.1.2.a, as shown below. The specific changes to Technical Specification 4.3.1 are shown in bold typeface.

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Pressurized Water Reactor (PWR) fuel assemblies having a maximum k-infinity of 1.41 in the normal reactor core configuration at cold conditions;

b. (Not used.)

c. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in the storage racks to ensure the k_{eff} limit is not exceeded.

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

a. (Not used.)

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR;

c. $k_{eff} \leq 0.90$ when in a dry condition, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in storage racks to ensure the k_{eff} limits are not exceeded.

Enclosure 2 contains a marked-up version of the Unit 1 Technical Specifications showing the proposed changes. Since Technical Specification Sections 4.2.1, 4.3.1.1, and 4.3.1.2 for Unit 1 and Unit 2 are identical, only the mark-up for Unit 1 is provided. Enclosures 4 and 5 provide typed versions of the affected Unit 1 and Unit 2 Technical Specification pages, respectively. These typed Technical Specification pages are to be used for issuance of the proposed amendments. There are no Technical Specification Bases changes associated with the changes to the fuel design description and the fuel storage criticality analysis methods.

3.0 Background

On March 10, 2006, CP&L held a public meeting with the NRC to discuss plans to change the Brunswick Unit 1 and 2 reload fuel supplier from GNF-A to AREVA NP. A summary of this meeting was issued by the NRC on April 27, 2006 (i.e., Reference 1). As presented during the public meeting, CP&L plans included submittal of at least two separate license amendment applications to request the Technical Specification changes needed to support loading and use of the ATRIUM™-10 fuel assemblies.

This letter provides the proposed Technical Specification changes to allow for receipt and storage of the ATRIUM™-10 fuel assemblies. Under a separate submittal (i.e., Reference 2), CP&L has submitted proposed changes necessary to incorporate the AREVA NP analytic methods, previously approved by the NRC, that will be used to establish core operating limits. If changes to the Minimum Critical Power Ratio (MCPR) Safety Limit (SL) values are required to support operation with the ATRIUM™-10 fuel, CP&L anticipates submittal of those MCPR SL changes in July 2007.

CP&L plans to begin receiving AREVA fuel in December 2007, for loading during the Unit 1 refueling outage scheduled to begin in March 2008. To support the fuel receipt schedule, CP&L is requesting issuance of the proposed license amendments by November 1, 2007.

4.0 Technical Analysis

Fuel Design Description

Currently, Technical Specification 4.2.1, "Fuel Assemblies," provides a general description of fuel assembly designs in use at BSEP, Units 1 and 2. CP&L currently uses only GNF-A fuel, and the description in Technical Specification 4.2.1 is consistent with the physical characteristics of GNF-A fuel. A minor change is needed to Technical Specification 4.2.1 to revise the description of the fuel assemblies to be compatible with AREVA NP ATRIUM™-10 fuel. The ATRIUM™-10 fuel assembly design uses a water channel to increase neutron moderation rather than the water rods used in GNF-A designs. The Technical Specification 4.2.1 description is being modified to reference water channels as well as water rods so that the description is applicable to both GNF-A and AREVA NP fuel.

Stored Fuel Analysis Methods

Technical Specifications 4.3.1.1 and 4.3.1.2 address fuel storage criticality design criteria for the spent fuel pool racks and the new fuel storage racks, respectively. Brunswick Updated Final Safety Analysis Report (UFSAR), Sections 9.1.1, "New Fuel Storage," and 9.1.2, "Spent Fuel Storage," provide criticality criteria for the new fuel storage racks and spent fuel storage racks, respectively. The spent fuel pool storage racks are used for the storage of spent fuel and temporary storage of new fuel prior to loading in the reactor core.

For the spent fuel pool racks, the UFSAR criticality criterion specifies that the effective multiplication factor will be less than or equal to 0.95 (i.e., see UFSAR Sections 9.1.2.1 and 9.1.2.3.2.1). This criterion is restated in Technical Specification 4.3.1.1.c. For the new fuel pool racks, the UFSAR criticality criterion specifies that the effective multiplication factor will be less than or equal to 0.90 for dry conditions and less than or equal to 0.95 for wet conditions (i.e., see UFSAR Section 9.1.1.3). This criterion is restated in Technical Specification 5.3.1.2.b and Technical Specification 5.3.1.2.c.

Technical Specifications 4.3.1.1 and 4.3.1.2 prescribe the use of an in-core k-infinity criteria. As explained in Section 3.5 of NEDE-24011-P-A, , *General Electric Standard Application for Reactor Fuel*, the k-infinity criteria in Technical Specifications 4.3.1.1.b and 4.3.1.2.a are the uncontrolled lattice k-infinity criteria used in the GNF criticality methodology to ensure the storage rack effective multiplication factor criteria (i.e., Technical Specification 4.3.1.1.c, Technical Specification 4.3.1.2.b, and Technical Specification 4.3.1.2.c) are satisfied for the GE fuel types. AREVA NP uses an in-pool k-effective criticality criteria, on an assembly basis, of less than or equal to 0.95, or less than or equal to 0.90 under dry conditions for the new fuel pool racks. AREVA determines the pool k-effective by using computer codes, such as KENO, and includes cycle-specific factors, such as fuel enrichments, gadolinia loadings, fuel types, and the worst (i.e., most conservative) credible conditions.

Until now, including the k-infinity methodology criteria has not been a problem because only GNF-A fuel was being used at BSEP, Units 1 and 2. However, with the introduction of AREVA NP fuel at BSEP, if the GNF-A k-infinity criteria were to be retained, a distinction would need to be made so that Technical Specification 4.3.1.1.b and Technical Specification 4.3.1.2.a would apply only to GNF-A fuel. A review of Technical Specifications from several BWR facilities that already use both GNF-A and AREVA NP fuel showed that that these facilities did not have vendor-specific acceptance criteria equivalent to 4.3.1.1.b and 4.3.1.2.a in their Technical Specifications. The removal of the k-infinity criteria from the BSEP Technical Specifications will not impact the basic criticality criteria associated with the storage of irradiated fuel (i.e., Technical Specification 4.3.1.1.c) and new fuel (i.e., Technical Specification 4.3.1.2.b and Technical Specification 4.3.1.2.c). Therefore, to enhance clarity and to ensure consistency with how these requirements have been handled at other BWR plants, the vendor-specific k-infinity criteria for BWR fuel is being eliminated in Technical Specification 4.3.1.1.b and 4.3.1.2.a. This change will make Technical Specification 4.3.1.1 and 4.3.1.2 compatible with the storage of both GNF-A and AREVA NP fuel.

5.0 Regulatory Safety Analysis

5.1 No Significant Hazards Consideration

Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., is submitting proposed amendments to support transition to AREVA NP fuel and core design and analysis services. The proposed amendments: (1) revise Technical

Specification 4.2.1, "Fuel Assemblies," to modify the fuel design description to encompass the AREVA NP fuel assemblies, and (2) revise Technical Specification 4.3, "Fuel Storage," to remove nomenclature specific to Global Nuclear Fuels – Americas (GNF-A) analysis methods. CP&L has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No

   The proposed amendments revise the fuel bundle description contained in Technical Specification 4.2.1, "Fuel Assemblies," to reflect both the existing fuel designs in use and the new AREVA NP fuel design. The change to the fuel assembly description involves a minor revision to reflect that AREVA fuel assemblies have a water channel.

   The proposed amendments also revise Technical Specification 4.3, "Fuel Storage," to remove criteria specific to GNF-A fuel storage criticality methods. The criticality analysis criteria being retained in Technical Specifications 4.3.1.1 and 4.3.1.2 will continue to ensure that adequate criticality margins are maintained for new and spent fuel storage.

   These changes do not involve any plant modifications or operational changes that could affect system reliability, performance, or possibility of an operator error. These requested changes do not affect any postulated accident precursors, do not affect the performance of any accident mitigation systems, and do not introduce any new accident initiation mechanisms.

   Based on the above, the proposed amendments do not involve an increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No

   As previously stated, the proposed amendments revise Technical Specification fuel bundle description and fuel storage rack criticality requirements to support receipt and storage of a new fuel bundle manufactured by a different vendor. Analytic methods will continue to be used to demonstrate the criticality acceptability of fuel being stored in the new and spent fuel storage racks. As such, the proposed amendments do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No

   The proposed amendments incorporate an administrative revision to the Technical Specification fuel bundle description and modify the fuel storage Technical Specification requirements to remove vendor-specific nomenclature for criticality analysis criteria. Criticality analyses for new and spent fuel storage will continue to ensure compliance with fuel storage and criticality criteria described in the Updated Final Safety Analysis Report.

   Therefore, the proposed amendments do not involve a significant reduction in a margin of safety.

Based on the above, CP&L concludes that the proposed amendments present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50.36, "Technical Specifications," provides the regulatory requirements for the content required in a licensee's Technical Specifications. 10 CFR 50.36(c) delineates the items to be included in the Technical Specifications. 10 CFR 50.36(c)(4) requires that the design features include those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (c)(1), (2), and (3) of this section. Based on the above, the controls and analytical methods used for the fuel storage racks are included in Section 4 of the Technical Specifications.

The BSEP design was reviewed for construction under the "General Design Criteria for Nuclear Power Plant Construction" issued for comment by the Atomic Energy Commission (AEC) in July 1967 and is committed to meet the intent of the GDC, published in the Federal Register on May 21, 1971, as Appendix A to 10 CFR Part 50. Controls and analytical methods will continue to be employed to ensure criticality in the fuel storage racks will be prevented. As such, conformance with GDC 62, "Prevention of criticality in fuel storage and handling," is not impacted by the proposed changes to fuel storage rack criticality requirements.

6.0 Environmental Considerations

A review has determined that the proposed amendments would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendments do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released

offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendments meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendments.

7.0 References

1. "Summary of March 10, 2006, Meeting with Carolina Power & Light Company (CP&L), Regarding the Fuel Transition Process and Licensing Submittals for Brunswick Steam Electric Plant, Units 1 and 2," dated April 27, 2006, ADAMS Accession Number ML061000574.

2. Letter from Mr. James Scarola (CP&L) to the Document Control Desk (NRC), "Request for License Amendments Regarding Linear Heat Generation Rate and Core Operating Limits Report References for AREVA NP Fuel," dated January 22, 2007.

BSEP 06-0128
Enclosure 2

Markup of Technical Specification Pages - Unit 1

4.0 DESIGN FEATURES

4.1 Site Location

4.1.1 Site and Exclusion Areas

The site area and exclusion area are the same area. This area is and shall be maintained as the area located within the site area boundary as shown in Figure 4.1-1.

4.1.2 Low Population Zone

The low population zone is and shall be maintained as the area located within a circle with its center at the plant and a radius of two miles.

4.2 Reactor Core

4.2.1 Fuel Assemblies

or channels

The reactor shall contain 560 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material, gadolinia rods, water rods, and a surrounding channel. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with NRC staff approved codes and methods and have been shown by tests or analyses to comply with all safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 Control Rod Assemblies

The reactor core shall contain 137 cruciform shaped control rod assemblies. The control material shall be boron carbide or hafnium absorber material as approved by the NRC.

(continued)

4.0 DESIGN FEATURES (continued)

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Pressurized Water Reactor (PWR) fuel assemblies having a maximum k-infinity of 1.41 in the normal reactor core configuration at cold conditions;

b. (Not used.) Boiling Water Reactor (BWR) fuel assemblies having a maximum k-infinity of 1.33 in the normal reactor core configuration at cold conditions;

c. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in the storage racks to ensure the k_{eff} limit is not exceeded.

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

a. (Not used.) Fuel assemblies having a maximum k-infinity of 1.31 in the normal reactor core configuration at cold conditions;

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR;

c. $k_{eff} \leq 0.90$ when in a dry condition, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in storage racks to ensure the k_{eff} limits are not exceeded.

(continued)

Typed Technical Specification Page - Unit 1

4.0 DESIGN FEATURES

4.1 Site Location

4.1.1 Site and Exclusion Areas

The site area and exclusion area are the same area. This area is and shall be maintained as the area located within the site area boundary as shown in Figure 4.1-1.

4.1.2 Low Population Zone

The low population zone is and shall be maintained as the area located within a circle with its center at the plant and a radius of two miles.

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain 560 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material, gadolinia rods, water rods or channels, and a surrounding channel. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with NRC staff approved codes and methods and have been shown by tests or analyses to comply with all safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 Control Rod Assemblies

The reactor core shall contain 137 cruciform shaped control rod assemblies. The control material shall be boron carbide or hafnium absorber material as approved by the NRC.

(continued)

4.0 DESIGN FEATURES (continued)

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Pressurized Water Reactor (PWR) fuel assemblies having a maximum k-infinity of 1.41 in the normal reactor core configuration at cold conditions;

b. (Not used.)

c. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in the storage racks to ensure the k_{eff} limit is not exceeded.

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

a. (Not used.)

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR;

c. $k_{eff} \leq 0.90$ when in a dry condition, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in storage racks to ensure the k_{eff} limits are not exceeded.

(continued)

Typed Technical Specification Page - Unit 2

4.0 DESIGN FEATURES

4.1 Site Location

4.1.1 Site and Exclusion Areas

The site area and exclusion area are the same area. This area is and shall be maintained as the area located within the site area boundary as shown in Figure 4.1-1.

4.1.2 Low Population Zone

The low population zone is and shall be maintained as the area located within a circle with its center at the plant and a radius of two miles.

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain 560 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material, gadolinia rods, water rods or channels, and a surrounding channel. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with NRC staff approved codes and methods and have been shown by tests or analyses to comply with all safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 Control Rod Assemblies

The reactor core shall contain 137 cruciform shaped control rod assemblies. The control material shall be boron carbide or hafnium absorber material as approved by the NRC.

(continued)

4.0 DESIGN FEATURES (continued)

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Pressurized Water Reactor (PWR) fuel assemblies having a maximum k-infinity of 1.41 in the normal reactor core configuration at cold conditions;

b. (Not used.)

c. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in the storage racks to ensure the k_{eff} limit is not exceeded.

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

a. (Not used.)

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR;

c. $k_{eff} \leq 0.90$ when in a dry condition, which includes an allowance for uncertainties as described in Section 9.1 of the UFSAR; and

d. Sufficient center to center distance between fuel assemblies placed in storage racks to ensure the k_{eff} limits are not exceeded.

(continued)