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SUBJECT: Application for amends to Licenses NPF-41,NPF-51 & NPF-74, relocating certain cycle-specific paramaters from TS to unit-specific core operating limits rept,per Generic Ltr 88-16.Core operating repts for all three units encl.

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WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

161-04682-WFC/JRP
March 19, 1992

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
Technical Specification Amendment Request
Incorporation of Generic Letter 88-16
File: 92-F-419.05; 92-056-026

In accordance with 10 CFR 50.90, Arizona Public Service Company submits herewith a request to amend Facility Operating Licenses NPF-41, NPF-51, and NPF-74. These amendments are requested to relocate certain cycle-specific parameters from the PVNGS Units 1, 2, and 3 Technical Specifications to a unit-specific Core Operating Limits Report (COLR), as discussed in Generic Letter 88-16.

Enclosure 1 to this amendment request includes the following:

A. Description of Amendment Request
B. Purpose of the Technical Specifications
C. Need for the Technical Specification Amendment
D. Basis for No Significant Hazards Consideration
E. Safety Analysis for the Proposed Amendment Request
F. Environmental Impact Consideration Determination
G. Marked-up Technical Specification Pages

Enclosure 2 to this amendment provides a sample COLR for each unit, based on current cycle data.

By copy of this letter and enclosures, the Arizona Radiation Regulatory Agency is being notified of this request for a Technical Specification amendment, pursuant to 10 CFR 50.91(b)(1).

270007

A001

If you have any questions, please call Michael E. Powell of my staff at (602) 340-4981.

Sincerely,

WFC/KLMC/pmm

Enclosures

cc: J. B. Martin
D. H. Coe
W. A. Wright
A. C. Gehr
A. H. Gutterman

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, W. F. Conway, represent that I am Executive Vice President - Nuclear, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true and correct.

W. F. Conway

Sworn To Before Me This 19 Day Of March, 1992.

Nora E. Meador
Notary Public

My Commission Expires

My Commission Expires April 6, 1995

A. DESCRIPTION OF AMENDMENT REQUEST

The proposed Technical Specification amendment involves the relocation of several cycle-specific core operating limits from their respective Technical Specification to the Core Operating Limits Report (COLR). The revised Technical Specifications will reference the COLR for specific parameters, and will continue to define how the COLR limits are maintained. The following Technical Specifications are affected by the proposed license amendment:

3.1.1.2 Shutdown Margin K_{N-1} - Any Control Element Assembly (CEA) Withdrawn: Changed to delete reference to Figure 3.3-1A, add reference to the COLR, and delete Figure 3.3-1A.

3.1.1.3 Moderator Temperature Coefficient: Changed to delete reference to Figure 3.1-1, add reference to the COLR, and delete Figure 3.1-1.

3.1.2.7 Boron Dilution Alarms: Changed to delete reference to Tables 3.1-1 through 3.1-5, add reference to the COLR, and delete Figures 3.1-1 through 3.1-5.

3.1.3.1 Moveable Control Rod Assemblies - CEA Position: Changed to delete reference to Figure 3.1-2A, add reference to the COLR, and delete Figure 3.1-2A.

3.1.3.6 Regulating CEA Insertion Limits: Change to delete reference to Figures 3.1-3 and 3.1-4, add reference to the COLR, and delete Figures 3.1-3 and 3.1-4.

3.1.3.7 Part Length CEA Insertion Limits: Changed to delete reference to Figure 3.1-5, add reference to the COLR, and delete Figure 3.1-5.

3.2.1 Linear Heat Rate: Change to delete reference to the linear heat rate of 13.5 kW/ft and add reference to the COLR.

3.2.3 Azimuthal Power Tilt - T_q: Changed to delete reference to Figure 3.2-1A, add reference to the COLR, and delete Figure 3.2-1A.

3.2.4 Departure from Nucleate Boiling Ratio (DNBR) Margin: Changed to delete reference to Figures 3.2-1, 3.2-2, and 3.2-2A; add reference to the COLR, and delete Figures 3.2-1, 3.2-2, and 3.2-2A.

3.2.7 Axial Shape Index: Changed to delete reference to the specific Axial Shape Index limits and add reference to the COLR.

ADMINISTRATIVE CONTROLS

Changed to add reporting requirements for the COLR.

The following proposed changes are generally administrative in nature:

INDEX Changed to add reference to COLR, indicate deletion of Figures which are to be relocated to the COLR, and revise the page numbers.

DEFINITIONS Changed to add the definition of the COLR.

3.1.2.6 Borated Water Sources - Operating: Changed to reflect Figure 3.1-2 renumbered as Figure 3.1-1.

3.2.6 Reactor Coolant Cold Leg Temperature: Changed to reflect Figure 3.2-3 renumbered as 3.2-1.

3.5.4 Refueling Water Tank: Changed to reflect Figure 3.1-2 renumbered as Figure 3.1-1.

BASES Changed to delete reference to Figures 3.1-2A, 3.2-1A, 3.2-2, and 3.2-2A; delete reference to 13.5 kW/ft; and add reference to the COLR.

B. PURPOSE OF THE TECHNICAL SPECIFICATIONS

The following discussions provide the purpose of the major Technical Specifications impacted by the proposed license amendment:

3.1.1.2 Shutdown Margin K_{N-1} - Any CEA Withdrawn

This specification ensures that the reactor remains subcritical following a design basis accident or anticipated operational occurrence. The shutdown margin changes from cycle to cycle as a result of the reload fuel management. The requirements related to shutdown margin are evaluated each cycle as part of the reload analyses.

3.1.1.3 Moderator Temperature Coefficient

The Moderator Temperature Coefficient (MTC) is a strong function of the reload fuel management as well as core burnup. The safety analyses performed each cycle ensures that the MTC is bounded by the analysis assumptions.

3.1.2.7 Boron Dilution Alarms

The boron dilution alarm limits defined by this Technical Specification are based on cycle-specific analyses which determine that in the event of a boron dilution event, the operators have adequate time to take corrective action.

3.1.3.1 Moveable Control Rod Assemblies - CEA Position

The cycle-specific safety analyses include the evaluation of CEA misoperation events to ensure that adequate margin is provided in the event of a CEA misalignment. Cycle-specific core physics parameters, such as static radial distribution factors, are input to the safety analyses which determine the limit line given by Figure 3.1-2a.

3.1.3.6 Regulating CEA Insertion Limits
3.1.3.7 Part Length CEA Insertion Limits

The power dependent insertion limits provided by Technical Specifications 3.1.3.6 and 3.1.3.7 ensure that the core is operated within the initial condition assumptions used in generating the LCO and Limiting Safety System Settings setpoints. The limits can change from cycle to cycle to ensure that the results of the safety analyses are acceptable. The limits impact the cycle-specific safety analyses since they define an initial condition analysis range for CEA position. The CEA positions are used to determine the range of CEA-related physics parameters to be used in the safety analyses.

3.2.1 Linear Heat Rate

The linear heat rate limit provided by this specification ensures that the fuel cladding will not exceed the analyzed limits in the event of a LOCA. The LOCA analyses are dependent on several of the core physics characteristics that are defined by the reload fuel management.

3.2.3 Azimuthal Power Tilt - T_q

The cycle-specific reload analyses include allowances for the maximum amount of azimuthal power tilt. The analyses performed each cycle include appropriate allowances for the maximum tilt in conjunction with other core physics related parameters. The maximum tilt limit may change to ensure that the results of the safety analyses are acceptable.

3.2.4 DNBR Margin

The DNBR margin related limits given by Figures 3.2-1, 3.2-2, and 3.2-2a are determined each cycle when the Core Protection Calculators (CPCs) and/or Core Operating Limit Supervisory System (COLSS) are in a degraded condition (COLSS out of service and/or CEACs inoperable). The limits given by these figures are dependent on the cycle-specific margin requirements for the given conditions, and the margin requirements are affected by the reload fuel management.

3.2.7 Axial Shape Index

The axial shape index range limits provided by this Technical Specification ensure that the actual value of core average axial shape index is maintained within the range of values used in the safety analyses. The limits include the uncertainty associated with the accuracy of the CPC and COLSS calculation of the actual axial shape index. These uncertainties are affected by the reload fuel management and are evaluated as part of the reload analyses.

C. NEED FOR THE TECHNICAL SPECIFICATION AMENDMENT

Generic Letter 88-16, dated October 4, 1989, was issued to encourage licensees to prepare changes to the Technical Specifications related to cycle-specific parameters. The proposed changes will relocate cycle-specific parameter limits from the Technical Specifications to the COLR. All cycle-specific limits to be included in the COLR are calculated using NRC approved methodologies, and changes to these limits will require a safety review in accordance with 10 CFR 50.59 instead of prior approval of the NRC. Thus, removal of the cycle-specific limits from the Technical Specifications will reduce the administrative burden for review and processing of this type of change on both Arizona Public Service Company and the NRC. In addition, the COLR will be submitted to the NRC to allow for continued trending of the cycle specific parameters.

D. BASIS FOR NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility in accordance with a 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. A discussion of these standards as they relate to this amendment request follows:

Standard 1 -- Involve a significant increase in the probability or consequences of an accident previously evaluated.

This amendment request removes the cycle-specific core operating limits from the Technical Specifications and is consistent with the guidance provided in Generic Letter 88-16 in that the proposed Technical Specifications reference a formal report (COLR) which contains the cycle-specific core operating limits. To support these changes, the associated reporting requirements are included in Section 6.9.1 (Administrative Controls) and the COLR is referenced in place of the limits removed from the Technical Specifications.

The removal of cycle-specific limits from the Technical Specifications has no impact on plant operation or accident analyses since the proposed change is administrative in nature. The Technical Specifications will continue to require operation within the limits for each cycle reload as calculated by using approved reload design methodologies. Appropriate actions required if limits are violated will remain in the Technical Specifications.

Standard 2 -- Create the possibility of a new or different kind of accident from any accident previously analyzed.

As stated above, the removal of cycle-specific limits from the Technical Specifications has no impact on plant operation or accident analyses since the proposed changes are administrative in nature. No safety-related equipment, safety function, or plant operation will be altered as a result of the proposed changes. Therefore, the possibility of a new or different kind of accident from any accident previously analyzed will not be created.

Standard 3 -- Involve a significant reduction in a margin of safety.

The margin of safety presently provided is not affected by the removal of cycle-specific core operating limits from the Technical Specifications. The core limits contained in the COLR are obtained through analyses using NRC-approved methodologies. The Technical Specifications still: a) require that the core be operated within these limits, and b) specify appropriate actions to be taken if the limits are violated.

The cycle-specific COLR limits for future reloads will also be developed based on NRC-approved methodologies. In addition, each future reload evaluation will include a 10 CFR 50.59 safety review to assure that operation of the PVNGS units within the cycle-specific limits will not involve a significant reduction in the margin of safety.

E. SAFETY ANALYSIS FOR THE PROPOSED AMENDMENT REQUEST

The current Technical Specification method of controlling the cycle-specific parameters to assure conformance to 10 CFR 50.36 (which requires the lowest functional levels acceptable for continued safe operation) is to specify the values determined to be within the acceptance criteria using an NRC approved calculation methodology. The methodologies for calculating these parameters have been approved by the NRC and are consistent with the applicable limits in the Updated Final Safety Analysis Report (UFSAR).

The removal of the cycle-specific parameters from the Technical Specifications has no impact on plant operation or safety. No safety equipment, safety function, or plant operations will be altered as a result of this proposed change. The applicable PVNGS UFSAR limits will be maintained, and the Technical Specifications will continue to require operation within the core operating limits calculated by NRC approved methodologies. This proposed amendment is administrative in nature and does not affect the purpose of the Technical Specification involved. Appropriate actions to be taken if the limits are violated will remain in the Technical Specifications.

The proposed changes will control the cycle-specific limits within the acceptance criteria and assure conformance to 10 CFR 50.36 by using the NRC approved methodology instead of specifying Technical Specification values. The COLR will document the specific cycle-specific limits resulting from the NRC approved calculational methods. Therefore, the proposed change is in conformance with the requirements of 10 CFR 50.36.

Any revisions to the COLR will be made in accordance with the requirements of 10 CFR 50.59. A copy of the revised COLR will be sent to the NRC as specified in proposed Technical Specification 6.9.1. The COLR will be revised from cycle to cycle as necessary. The Technical Specifications will not be revised.

F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

APS has determined that the proposed amendment involves no change in the amount or type of effluent that may be released offsite, and that there is no increase in individual or cumulative occupational radiation exposure. As such, operation of PVNGS Units 1, 2, and 3, in accordance with the proposed amendments, does not involve an unreviewed environmental safety question.

G. MARKED-UP TECHNICAL SPECIFICATION PAGES

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