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SUBJECT: Application for amends to Licenses NPF-41,NPF-51 & NPF-74 changing azimuthal power tilt Tech Specs.

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161-01059-EEVB/PGN
May 27, 1988

Docket Nos. STN 50-528/529/530

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

ATTN: Document Control Desk

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
Technical Specification Amendment -
Section 3/4.2.3
File: 88-F-005-419.05; 88-A-056-026

Attached please find proposed changes to the PVNGS Units 1, 2 and 3 Technical Specifications (TS). The proposed change modifies the azimuthal power tilt TS to require that the measured azimuthal power tilt be less than the CPC allowance at all times. In addition, the azimuthal power tilt limit is increased for Unit 2 only.

Enclosed with the amendment request package, are the following:

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

Once issued, the technical specification amendment will be implemented within thirty days of the issue date.

By copy of this letter, we are also forwarding the proposed changes to the appropriate state agency.

In accordance with the requirements of 10CFR170.12(c), the license amendment application fee of $150.00 is attached.

A001 w/check $150 #004148

If you have any questions, please call A. C. Rogers at (602) 371-4041.

Very truly yours,

E. E. Van Brunt, Jr.
Executive Vice President
Project Director

EEVB/PGN/dlm
Attachments

cc: A. C. Gehr (all w/a)
G. W. Knighton
E. A. Licitra
J. B. Martin
T. J. Polich
C. E. Tedford

ATTACHMENT

A. DESCRIPTION OF THE TECHNICAL SPECIFICATION AMENDMENT REQUEST

This change modifies Technical Specification (TS) 3.2.3 to require that the measured azimuthal power tilt be less than the allowance used in the CPCs at all times. A wording change is also made to refer to COLSS as being "in service" or "out of service", as opposed to operable or inoperable. In addition, the azimuthal power tilt limit with COLSS in service is increased for Unit 2 only.

B. PURPOSE OF THE TECHNICAL SPECIFICATION

The limitations on the azimuthal power tilt are provided to ensure that design safety margins are maintained. It is necessary to explicitly account for power asymmetries because the radial peaking factors used in the core power distribution calculations are based on an untilted power distribution.

C. NEED FOR THE TECHNICAL SPECIFICATION AMENDMENT

During review of the PVNGS Unit 2 Cycle 2 RAR and Reload T.S., the NRC questioned whether the CPC azimuthal power tilt allowance could become non-conservative when the measured azimuthal power tilt exceeds the T.S. limit. This question was also raised during a NRC enhanced operational inspection of PVNGS Unit 3 conducted on December 10-18, 1987.

The purpose of this T.S. Amendment is to address the above concerns as well as raise the azimuthal power tilt limits for Unit 2. The amendment will modify T.S. 3.2.3 to require the azimuthal power tilt to be less than the allowance used in the CPC's.

The wording change to refer to COLSS as "in service" or "out of service" as opposed to operable or inoperable provides consistency throughout the TS. Since there is no TS on COLSS the terms operable and inoperable are not well defined with respect to COLSS.

In addition, the azimuthal power tilt limits with COLSS in service are increased for Unit 2 only. Relaxing this limit will allow the operators to better mitigate the consequences of xenon transients occurring below 40% power. The relaxation of the limit is being requested for Unit 2 only at this time, since the supporting analyses, which are unit and cycle specific, have not yet been completed for Units 1 and 3. They will be performed during the next reload analysis for each unit, and separate T.S. submittals will be made at that time.

D. BASIS FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

1. 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 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 the amendment request follows:

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

The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated since the results of the Unit 2 Cycle 2 analysis incorporate the higher tilt values (with COLSS in service). This assures that there is sufficient margin in the safety analysis for the most limiting Design Basis Event.

The analyses performed included physics calculations for all reactivity insertion events for which the azimuthal power tilt is an explicit input. These analyses include CEA Ejection, Single FLCEA Withdrawal, and Single PLCEA Drop events. For the remaining Design Basis Events, there is sufficient conservatism in the assumptions made for the initial conditions to account for the increased azimuthal power tilt allowed below 40% power. At greater than 40% power the proposed limits are identical to the reference cycle (cycle 1) and is bounded by that analysis.

The generic change that requires that the measured azimuthal power tilt be less than the CPC allowance provides an additional restriction, therefore, the probability or consequences of an accident previously evaluated will not be increased.

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

The proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed T.S. Amendment only changes the azimuthal power tilt limits, and does not modify any plant equipment or operating procedures. The generic change that requires the measured azimuthal power tilt to be less than the azimuthal power tilt allowance used in the CPC's is more restrictive than the present T.S. requirement. The relaxation of the azimuthal power tilt limit for Unit 2 allows the operators to better mitigate xenon transients below 40% power. Therefore, the possibility of a new or different kind of accident from any previously evaluated will not be created.

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

The proposed change will not involve a significant reduction in a margin of safety since additional restrictions are being imposed to ensure that the azimuthal power tilt is less than or equal to the allowance used in the CPCs at all times. The results of the

analyses assuming the higher tilt values assure that there is sufficient margin for the most limiting Design Basis Event. Therefore, the margin of safety will not be reduced.

2. The proposed change matches the guidance concerning the application of the standards for determining whether or not a significant hazards consideration exists (51 FR 7751) by the example:

(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.

AND

(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 acceptable criteria for the technical specifications, the analytical methods used to demonstrate conformance with the technical specifications and regulations are not significantly changed, and that the NRC has previously found such methods acceptable.

E. SAFETY EVALUATION FOR THE AMENDMENT REQUEST

The proposed change will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR.

The results of the Unit 2 Cycle 2 analyses assuming the higher tilt values (with COLSS in service) assure there is sufficient margin for the most limiting Design Basis Events. The analyses performed included physics calculations for all reactivity insertion events for which the azimuthal power tilt is an explicit input. These analyses include CEA Ejection, Single FLCEA Withdrawal, and Single PLCEA Drop events. For the remaining Design Basis Events, there is sufficient conservatism in the assumptions made for the initial conditions to account for the increased azimuthal power tilt allowed below 40% power. At greater than 40% power the proposed limits are identical to the reference cycle (cycle 1) and is bounded by that analysis.

The generic change that requires that the measured azimuthal power tilt be less than the CPC allowance provides an additional restriction, therefore, the probability or consequences of an accident previously evaluated will not be increased.

The change makes no modification to plant equipment or operating procedures, therefore, the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR will not be increased.

The proposed change will not create the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR. The proposed change does not modify any plant equipment or operating procedures, but makes the TS more restrictive by requiring that the measured azimuthal power tilt be less than the CPC limit at all times. The relaxation of the azimuthal power tilt limit for Unit 2 allows the operators to better mitigate xenon transients below 40% power. Therefore, the possibility of a new or different kind of accident from any previously evaluated will not be credited.

The proposed change will not involve a significant reduction in a margin of safety since additional restrictions are being imposed to ensure that the azimuthal power tilt is less than or equal to the allowance used in the CPCs at all times. The results of the analyses assuming the higher tilt values assure that there is sufficient margin for the most limiting Design Basis Event. Therefore, the margin of safety will not be reduced.

F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed change request does not involve an unreviewed environmental question because operation of PVNGS UNits 1, 2 and 3, in accordance with this change, would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by the staff's testimony to the Atomic Safety and Licensing Board, Supplements to the FES, Environmental Impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or

2. Result in a significant change in effluents or power levels; or

3. Result in matters not previously reviewed in the licensing basis for PVNGS which may have a significant environmental impact.

G. MARKED-UP TECHNICAL SPECIFICATION CHANGE PAGES FOR UNIT 1, UNIT 2, AND UNIT 3:

Index:

XIX

Limiting Conditions for Operation and Surveillance Requirements:

3/4 2-3
3/4 2-4
3/4 2-4a

Bases:

B 3/4 2-2