





**Arizona Public Service Company**

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WILLIAM F. CONWAY  
EXECUTIVE VICE PRESIDENT  
NUCLEAR

161-02240-WFC/KLMC  
August 30, 1989

Docket Nos. STN 50-528/529

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Mail Station P1-37  
Washington, D. C. 20555

- References: (1) Letter to NRC from W. F. Conway, APS, dated June 20, 1989; Subject: Proposed Technical Specification Changes - Units 1 and 2
- (2) Letter to NRC from D. B. Karner, ANPP, dated December 14, 1988; Subject: Proposed Reload Technical Specification Changes
- (3) Letter from T. L. Chan, NRC, to W. F. Conway, APS, dated July 26, 1989; Subject: Proposed Technical Specification Changes - Palo Verde Nuclear Generating Station, Units 1 and 2, Re:Control Element Assembly Calculator (CEAC) Operation
- (4) Letter from M. J. Davis, NRC, to W. F. Conway, APS, dated June 9, 1989; Subject: Issuance of Amendment 18 to Facility Operating License No. NPF-74 for the Palo Verde Nuclear Generating Station, Unit 3 (TAC No. 71574)

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1 and 2  
Proposed Technical Specification Changes for Units 1 and 2  
File: 89-005-419.05

This letter revises our Reference (1) letter and is based on discussions with Terence Chan on August 7 and August 25, 1989. Reference (1) was similar to our request for a change on Unit 3, Reference (2). Reference (3) represents a request for more information than was required in the past. The additional information supplied herein will provide that information and will be helpful to the reviewer from an administrative standpoint, but does not change the technical aspects of our submittal. The requested changes for Units 1 and 2 are primarily format and editorial changes made to clarify operations when 1

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or 2 Control Element Assembly Calculators (GEAGs) are inoperable. These changes will achieve consistency in this area with changes already approved by the NRC, Reference (4), in Unit 3. As agreed with Mr. Chan, future submittals will include additional administrative information. APS requests 45 days to implement these changes after approval.

Provided in the attachment to this letter for the proposed Technical Specification changes are the following:

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

Pursuant to 10 CFR 50.91(b)(1), by copy of this letter and its attachment, APS has notified the Arizona Radiation Regulatory Agency of this request for Technical Specification amendment.

If you have any questions concerning this request, contact Mr. A. C. Rogers of my staff at (602) 371-4041.

Sincerely,



WFC/KLMC/jle

Attachment

cc: G. W. Knighton (all w/attachments)  
M. J. Davis  
T. L. Chan  
J. B. Martin  
T. J. Polich  
C. E. Tedford  
A. C. Gehr

## ATTACHMENT

### A. DESCRIPTION OF THE TECHNICAL SPECIFICATION AMENDMENT REQUEST

The proposed amendment modifies Technical Specification (TS) 3/4.1.3: Limiting Conditions for Operation (LCO) 3.1.3.1, 3.1.3.2, 3.1.3.5, 3.1.3.6, 3.1.3.7, Surveillance Requirements (SR) 4.1.3.5, 4.1.3.6, 4.1.3.7, TS 3/4.3.1: LCO 3.3.1, TS 3/4.10.4: LCO 3.10.4, and SR 4.10.4.1 and 4.10.4.2. These modifications are primarily format and editorial changes to clarify operation when 1 or 2 Control Element Assembly Calculators (CEACs) are inoperable. Detailed descriptions of these changes are as follows:

#### Technical Specification 3/4.1.3

LCO 3.1.3.1, Action c.2.a, is modified to eliminate specific reference to the figures which specify the full and part length Control Element Assembly (CEA) insertion limits, since the figures are contained within the Technical Specifications already referenced in this Action Statement. This change will simplify future Technical Specification changes in cases where figure numbers are changed, or figures within the Technical Specifications are added or deleted.

LCO 3.1.3.2, Action c, is modified to include reference to LCO 3.1.3.5 for shutdown CEA insertion limits for the purpose of clarification and completeness.

LCO 3.1.3.5, Action b, is modified to change the word "apply" to "comply with," for the purpose of clarification.

SR 4.1.3.5 b. is modified to include the specific requirement when both CEACs are inoperable. This is consistent with the current format of SR 4.1.3.1.1 and 4.1.3.6 for CEA and Regulating Group position and with the proposed format of SR 4.1.3.7 for Part Length Group Position. Also, the specific time interval requirement must be included in this Surveillance Requirement since it is proposed that it is removed from Table 3.3-1, Action 6b.3.

LCO 3.1.3.6, is reformatted to clarify and specify the operation and actions required for 1 or 2 CEACs inoperable, operating between the Long Term Steady State Insertion Limits (LTSSIL) and the Transient Insertion Limits (TIL), and operating between the Short Term Steady State Insertion Limits (STSSIL) and the Transient Insertion Limits (TIL). The reformatting is necessary to improve readability, decreasing the potential for human error.

LCO 3.1.3.6 a.2, is added to specify information previously contained only in the action statement, and clarifies restrictions on operation between the STSSIL and the TIL.

LCO 3.1.3.6 b, is added to clarify the specific insertion limits of CEA Group 5 for the condition of both CEACs inoperable (with or without COLSS in service), since it is appropriate that this insertion limit be specified within this LCO. Prior to this proposed change, the limitations applying to the specific condition of both CEACs inoperable were only contained in Table 3.3-1.

LCO 3.1.3.6, the last sentence was added referring to Regulating CEAs excluded by the insertion limits. This sentence clarifies information previously specified in a footnote. This footnote was deleted on page 3/4 1-29.

LCO 3.1.3.6, Action a, is modified to clarify operation for the condition of 1 or both CEACs inoperable and add direction to be in HOT STANDBY if the CEA groups cannot be maintained within the limits.

LCO 3.1.3.6, Action c, is a rewrite of what was previously Action b. This change was made for clarification purposes and to explicitly correspond with LCO 3.1.3.6 a.2, and to clearly state the action required for insertion between the STSSIL and the TIL.

SR 4.1.3.6, is modified to clarify that the requirement is applicable when both CEACs are inoperable. Additionally, "individual CEA" is changed to read more appropriately "CEA group," because this LCO/SR applies to "group" insertion. Surveillance Requirement 4.1.3.1.1 correctly addresses individual CEA position surveillance requirements.

LCO 3.1.3.7, is reformatted to clarify and specify the operation and actions required for 1 or both CEACs inoperable. The reformatting is necessary to improve readability and will decrease the potential for human error. Additions to Actions a.2a.2 and a.2b provide direction to be in HOT STANDBY if the CEA groups cannot be maintained within the limits.

SR 4.1.3.7, has minor editorial changes and is modified to include the requirement when both CEACs are inoperable. This is consistent with the current format of Surveillance Requirement 4.1.3.1.1 for CEA position and 4.1.3.6 for Regulating CEA Insertion. Also, the specific time interval requirements must be included in this Surveillance Requirement since it is proposed that it is removed from Table 3.3-1, Action 6b.3.

#### Technical Specification 3/4.3.1

LCO 3.3.1 Table 3.3-1, Action 6a, is modified to eliminate the details of the Surveillance Requirement from the Action Statement and instead, reference the appropriate Surveillance Requirement 4.1.3.1.1. The change will simplify future Technical Specification changes which involve changing the CEA position Surveillance Requirements.

LCO 3.3.1 Table 3.3-1, Action 6b.2.a, is modified to reference pertinent Technical Specifications and reference the specification from which the Group 5 limits came.

LCO 3.3.1 Table 3.3-1, Action 6b.2.c, is modified to reference appropriate pertinent Technical Specifications for CEA motion/position.

LCO 3.3.1 Table 3.3-1, Action 6b.3, is modified by removing the details of the specific requirements for individual CEA and group position surveillances, and instead, references the appropriate Surveillance Requirements.

#### Technical Specification 3/4.10.4

LCO 3.10.4, and SR 4.10.4.1 and 4.10.4.2 are modified to add reference to the Shutdown CEAs for completeness.

This amendment request is consistent with Technical Specification changes submitted and approved for the Unit 3, Cycle 2 Reload and will maintain the continuity between all three unit Technical Specifications.

#### B. PURPOSE OF THE TECHNICAL SPECIFICATION

The purpose of Technical Specifications 3.1.3.1, 3.1.3.2, 3/4.1.3.5, 3/4.1.3.6 and 3/4.1.3.7 is to ensure that acceptable power distribution limits are maintained, that the minimum shutdown margin is maintained and the potential effects of CEA misalignments are limited to acceptable levels.

#### C. NEED FOR TECHNICAL SPECIFICATION AMENDMENT

The primary reason for the proposed changes is to provide clarification to the Technical Specifications with respect to the CEACs operability. Additional editorial changes are proposed for general clarification. These changes will also maintain the consistency between all three unit Technical Specifications.

#### 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 10CFR50.92. 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 is as follows:

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

The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated because the changes provide additional assurance of proper adherence to the appropriate insertion limits.

#### Technical Specification 3/4.1.3

LCO 3.1.3.1, Action c.2.a, is modified to eliminate specific reference to the figures which specify the full and part length Control Element Assembly (CEA) insertion limits, since the figures are contained within the Technical Specifications already referenced in this Action Statement. This change will simplify future Technical Specification changes in cases where figure numbers are changed, or figures within the Technical Specifications are added or deleted.

LCO 3.1.3.2, Action c, is modified to include reference to LCO 3.1.3.5 for shutdown CEA insertion limits for the purpose of clarification and completeness.

LCO 3.1.3.5, Action b, is modified to change the word "apply" to "comply with," for the purpose of clarification.

SR 4.1.3.5 b. is modified to include the specific requirement when both CEACs are inoperable. This is consistent with the current format of SR 4.1.3.1.1 and 4.1.3.6 for CEA and Regulating Group position and with the proposed format of SR 4.1.3.7 for Part Length Group Position. Also, the specific time interval requirement must be included in this Surveillance Requirement since it is proposed that it is removed from Table 3.3-1, Action 6b.3.

LCO 3.1.3.6, is reformatted to clarify and specify the operation and actions required for 1 or 2 CEACs inoperable, operating between the Long Term Steady State Insertion Limits (LTSSIL) and the Transient Insertion Limits (TIL), and operating between the Short Term Steady State Insertion Limits (STSSIL) and the Transient Insertion Limits (TIL). The reformatting is necessary to improve readability, decreasing the potential for human error.

LCO 3.1.3.6 a.2, is added to specify information previously contained only in the action statement, and clarifies restrictions on operation between the STSSIL and the TIL.

LCO 3.1.3.6 b, is added to clarify the specific insertion limits of CEA Group 5 for the condition of both CEACs inoperable (with or without COLSS in service), since it is appropriate that this insertion limit be specified within this LCO. Prior to this proposed change, the limitations applying to the specific condition of both CEACs inoperable were only contained in Table 3.3-1.

LCO 3.1.3.6, the last sentence was added referring to Regulating CEAs excluded by the insertion limits. This sentence clarifies information previously specified in a footnote. This footnote was deleted on page 3/4 1-29.

LCO 3.1.3.6, Action a, is modified to clarify operation for the condition of 1 or both CEACs inoperable and add direction to be in HOT STANDBY if the CEA groups cannot be maintained within the limits.

LCO 3.1.3.6, Action c, is a rewrite of what was previously Action b. This change was made for clarification purposes and to explicitly correspond with LCO 3.1.3.6 a.2, and to clearly state the action required for insertion between the STSSIL and the TIL.

SR 4.1.3.6, is modified to clarify that the requirement is applicable when both CEACs are inoperable. Additionally, "individual CEA" is changed to read more appropriately "CEA group," because this LCO/SR applies to "group" insertion. Surveillance Requirement 4.1.3.1.1 correctly addresses individual CEA position surveillance requirements.

LCO 3.1.3.7, is reformatted to clarify and specify the operation and actions required for 1 or both CEACs inoperable. The reformatting is necessary to improve readability and will decrease the potential for human error. Additions to Actions a.2a.2 and a.2b provide direction to be in HOT STANDBY if the CEA groups cannot be maintained within the limits.

SR 4.1.3.7, has minor editorial changes and is modified to include the requirement when both CEACs are inoperable. This is consistent with the current format of Surveillance Requirement 4.1.3.1.1 for CEA position and 4.1.3.6 for Regulating CEA Insertion. Also, the specific time interval requirements must be included in this Surveillance Requirement since it is proposed that it is removed from Table 3.3-1, Action 6b.3.

#### Technical Specification 3/4.3.1

LCO 3.3.1 Table 3.3-1, Action 6a, is modified to eliminate the details of the Surveillance Requirement from the Action Statement and instead, reference the appropriate Surveillance Requirement 4.1.3.1.1. The change will simplify future Technical Specification changes which involve changing the CEA position Surveillance Requirements.

LCO 3.3.1 Table 3.3-1, Action 6b.2.a, is modified to reference pertinent Technical Specifications and reference the specification from which the Group 5 limits came.



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LCO 3.3.1 Table 3.3-1, Action 6b.2.c, is modified to reference appropriate pertinent Technical Specifications for CEA motion/position.

LCO 3.3.1 Table 3.3-1, Action 6b.3, is modified by removing the details of the specific requirements for individual CEA and group position surveillances, and instead, references the appropriate Surveillance Requirements.

Technical Specification 3/4.10.4

LCO 3.10.4, and SR 4.10.4.1 and 4.10.4.2 are modified to add reference to the Shutdown CEAs for completeness.

Clarifying operation when 1 or 2 CEACs are inoperable will increase the operator's ability to ensure proper operation of the reactor by reducing the possibility of human error. Therefore, the probability or consequences of an accident previously evaluated is not increased due to these proposed changes.

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

The proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated. As discussed in Standard 1, these changes are clarifications to provide additional assurance of proper operation when 1 or 2 CEACs are inoperable. Therefore, the possibility of any accident occurring is reduced.

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

The proposed changes do not involve a significant reduction in a margin of safety. As discussed in Standard 1, the changes provide additional assurance that when 1 or 2 CEACs are inoperable, proper operation will occur. The clarifications will ensure adherence to insertion limits which does not involve any reduction in a margin of safety.

2. The proposed amendment matches the guidance concerning the application of standards for determining whether or not a significant hazards consideration exists (51FR7751) by example:

- (i) A purely administrative change to the Technical Specifications: for example, a change to achieve consistency throughout the technical specifications, correction of an error, or a change in nomenclature.



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## E. SAFETY EVALUATION FOR THE AMENDMENT REQUEST

The proposed Technical Specification amendment consists of the following modifications which do not (1) increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the UFSAR, (2) create the possibility for an accident or malfunction of a different type than any evaluated previously in the UFSAR, or (3) reduce the margin of safety as defined in the bases of the Technical Specifications.

### Technical Specification 3/4.1.3

LCO 3.1.3.1, Action c.2.a, is modified to eliminate specific reference to the figures which specify the full and part length Control Element Assembly (CEA) insertion limits, since the figures are contained within the Technical Specifications already referenced in this Action Statement. This change will simplify future Technical Specification changes in cases where figure numbers are changed, or figures within the Technical Specifications are added or deleted.

LCO 3.1.3.2, Action c, is modified to include reference to LCO 3.1.3.5 for shutdown CEA insertion limits for the purpose of clarification and completeness.

LCO 3.1.3.5, Action b, is modified to change the word "apply" to "comply with," for the purpose of clarification.

SR 4.1.3.5 b. is modified to include the specific requirement when both CEACs are inoperable. This is consistent with the current format of SR 4.1.3.1.1 and 4.1.3.6 for CEA and Regulating Group position and with the proposed format of SR 4.1.3.7 for Part Length Group Position. Also, the specific time interval requirement must be included in this Surveillance Requirement since it is proposed that it is removed from Table 3.3-1, Action 6b.3.

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LCO 3.1.3.7, is reformatted to clarify and specify the operation and actions required for 1 or both CEACs inoperable. The reformatting is necessary to improve readability and will decrease the potential for human error. Additions to Actions a.2a.2 and a.2b provide direction to be in HOT STANDBY if the CEA groups cannot be maintained within the limits.

SR 4.1.3.7, has minor editorial changes and is modified to include the requirement when both CEACs are inoperable. This is consistent with the current format of Surveillance Requirement 4.1.3.1.1 for CEA position and 4.1.3.6 for Regulating CEA Insertion. Also, the specific time interval requirements must be included in this Surveillance Requirement since it is proposed that it is removed from Table 3.3-1, Action 6b.3.

#### Technical Specification 3/4.3.1

LCO 3.3.1 Table 3.3-1, Action 6a, is modified to eliminate the details of the Surveillance Requirement from the Action Statement and instead, reference the appropriate Surveillance Requirement 4.1.3.1.1. The change will simplify future Technical Specification changes which involve changing the CEA position Surveillance Requirements.

LCO 3.3.1 Table 3.3-1, Action 6b.2.a, is modified to reference pertinent Technical Specifications and reference the specification from which the Group 5 limits came.

LCO 3.3.1 Table 3.3-1, Action 6b.2.c, is modified to reference appropriate pertinent Technical Specifications for CEA motion/position.

LCO 3.3.1 Table 3.3-1, Action 6b.3, is modified by removing the details of the specific requirements for individual CEA and group position surveillances, and instead, references the appropriate Surveillance Requirements.



#### Technical Specification 3/4.10.4

LCO 3.10.4, and SR 4.10.4.1 and 4.10.4.2 are modified to add reference to the Shutdown CEAs for completeness.

The proposed Technical Specification amendment 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 proposed modifications do not change or replace equipment or components important to safety. These changes add additional assurance that plant operations will be performed in a safe manner. Therefore, there is no increase in the probability of occurrence or the consequences of an accident occurring.

The proposed Technical Specification amendment will not create the possibility for an accident or malfunction of a different type than any previously evaluated for the FSAR. The proposed changes will increase the operator's ability to ensure proper operation when 1 or 2 CEACs are inoperable. Therefore, the possibility for an accident or malfunction of a different type than previously evaluated will not be created by these modifications.

The proposed Technical Specification amendment will not reduce the margin of safety as defined in the basis for the Technical Specifications. The proposed changes will reduce the possibility of human error, thus providing additional assurance of proper operation when 1 or 2 CEACs are inoperable. Therefore, the defined margin of safety will not be reduced by these changes to the Technical Specifications.

#### F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed change request does not involve an unreviewed environmental question because operation of PVNGS Units 1 and 2, 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; 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

Limiting Conditions for Operation and Surveillance  
Requirements

3/4 1-21  
3/4 1-25  
3/4 1-28  
3/4 1-29  
3/4 1-30  
3/4 1-33  
3/4 3-7  
3/4 3-8  
3/4 10-4