



Palo Verde Nuclear
Generating Station

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102-04507-WEI/AKK/RJR
December 5, 2000

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-37
Washington, DC 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
Docket Nos. STN 50-528/529/530
Request for Amendment to Technical Specification 3.7.5,
Auxiliary Feedwater (AFW) System**

Arizona Public Service Company (APS) requests an amendment to Technical Specification 3.7.5, Auxiliary Feedwater (AFW) System, for each Palo Verde Nuclear Generating Station (PVNGS) Unit. The proposed amendment would allow a 7 day Completion Time for the turbine-driven AFW pump if the inoperability occurs in MODE 3 following a refueling outage and if MODE 2 had not been entered. This change is based on the approved Technical Specification Task Force (TSTF) Traveler Number 340, Revision 3.

Provided in the enclosure to this letter are the following sections which support the proposed Technical Specification amendment:

- A. Description of the Proposed Technical Specification Amendment
- B. Purpose of the Technical Specification
- C. Need for the Amendment
- D. Safety Analysis of the Proposed Technical Specification Amendment
- E. No Significant Hazards Consideration Determination
- F. Environmental Consideration
- G. Revised Technical Specification Pages
- H. Retyped Technical Specification Pages

ADD1

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Request for Amendment to Technical Specification 3.7.5
Page 2

In accordance with the PVNGS Quality Assurance Program, the Plant Review Board and Offsite Safety Review Committee have reviewed and concurred with this proposed amendment. By copy of this letter, this submittal is being forwarded to the Arizona Radiation Regulatory Agency (ARRA) pursuant to 10 CFR 50.91(b)(1).

Approval of this proposed amendment is requested by November 03, 2001, in order to be implemented prior to the startup of PVNGS Unit 3 from refueling outage 9. It is requested that this proposed amendment become effective within 45 days of issuance by the NRC for PVNGS Units 1, 2, and 3.

No commitments are being made to the NRC by this letter.

Should you have any questions, please contact Scott A. Bauer at (623) 393-5978.

Sincerely,



WEI/AKK/RJR/kg

Enclosure

cc: E. W. Merschoff (NRC Region IV) (all w/Enclosure)
J. N. Donohew (NRR Project Manager)
J. H. Moorman (NRC Resident Inspector)
A. V. Godwin (ARRA)

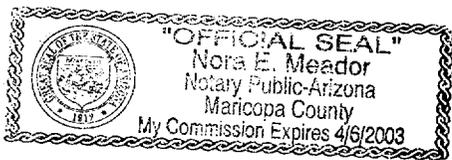
STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

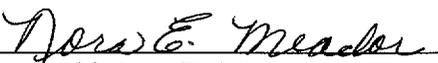
I, William E. Ide, represent that I am Vice President Nuclear Production, Arizona Public Service Company (APS), that the foregoing document has been signed by me on behalf of APS with full authority to do so, and that to the best of my knowledge and belief, the statements made therein are true and correct.



William E. Ide

Sworn To Before Me This 5 Day Of December, 2000.





Notary Public

My Commission Expires

April 6, 2003

ENCLOSURE

**Proposed Amendment to Units 1, 2 and 3
Technical Specification 3.7.5**

A. DESCRIPTION OF THE PROPOSED TECHNICAL SPECIFICATION AMENDMENT

The proposed amendment would allow a 7 day Completion Time for Condition A for the turbine-driven Auxiliary Feedwater (AFW) pump if the inoperability occurs in MODE 3 following a refueling outage and if MODE 2 had not been entered. This change is based on the approved Technical Specification Task Force (TSTF) Traveler Number 340, Revision 3 and is a permanent change to the PVNGS technical specifications.

B. PURPOSE OF THE TECHNICAL SPECIFICATION

The current Technical Specification 3.7.5, Auxiliary Feedwater (AFW) System, requires that three AFW trains be operable in MODES 1, 2 and 3, and contains a 72 hour Completion Time for Condition A for one inoperable AFW train. The Action is to be in MODE 3 within 6 hours and to be in MODE 4 within 12 hours if the 72 hour Completion Time is not met.

In MODES 1, 2, and 3, the AFW system is required to function in the event that the Main Feedwater system is lost. It must also supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions during plant shutdown. One essential AFW pump provides sufficient flow to remove decay heat and cool the unit to Shutdown Cooling System entry conditions.

C. NEED FOR THE AMENDMENT

The proposed amendment to Technical Specification 3.7.5 would allow a 7 day Completion Time for Condition A for the turbine-driven Auxiliary Feedwater pump if the inoperability occurs in MODE 3 following a refueling outage, if MODE 2 had not been entered. This proposed amendment would prevent unnecessary MODE changes and requests for enforcement discretion in that the additional Completion Time in MODE 3 would provide time to repair and retest the turbine-driven AFW pump following a refueling outage if the required surveillance requirements could not be met and inoperability occurs.

This change is based on the approved Technical Specification Task Force Traveler Number 340, Revision 3.

D. SAFETY ANALYSIS OF THE PROPOSED TECHNICAL SPECIFICATION AMENDMENT

In MODES 1, 2, and 3, the Auxiliary Feedwater (AFW) system is required to function in the event that the Main Feedwater system is lost. It must also supply enough makeup water to replace steam generator secondary inventory lost as the unit cools to MODE 4 conditions during plant shutdown. One essential AFW pump provides

sufficient flow to remove decay heat and cool the unit to Shutdown Cooling System entry conditions. The specification, however, requires 3 trains to be operable.

During unit start-up after a refueling outage, decay heat removal requirements are minimal. The additional Completion Time proposed by this amendment to Technical Specification 3.7.5, provides time to repair and retest the turbine-driven AFW pump following a refueling outage if the required surveillance requirements could not be met and inoperability occurs without the additional burden of unnecessary MODE changes or requests for enforcement discretion. The AFW system design affords adequate redundancy to allow the turbine-driven AFW pump to remain inoperable for the proposed extended Completion Time. The restriction of the Completion Time to MODE 3 after a refueling outage without having entered MODE 2 assures the decay heat load is at a minimal level.

This proposed amendment does not change, degrade, or prevent actions described or assumed in any accident. It will not alter any assumptions previously made in evaluating radiological consequences or affect any fission product barriers. It does not increase any challenges to safety systems. Therefore, this proposed amendment would not increase or have any impact on the consequences of events described and evaluated in Chapter 6 or Chapter 15 of the PVNGS UFSAR.

E. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

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 this amendment request follows:

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

No. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment to Technical Specification 3.7.5 would allow a 7 day Completion Time for Condition A for the turbine-driven Auxiliary Feedwater (AFW) pump if the inoperability occurs in MODE 3 following a refueling outage, if MODE 2 had not been entered. Extending the Completion Time does not involve a significant increase in the probability or consequences of an accident previously evaluated because: 1) the

proposed amendment does not represent a change to the system design, 2) the proposed amendment does not prevent the safety function of the AFW system from being performed since the other fully redundant essential train and the non-essential train are required to be operable, 3) the proposed amendment does not alter, degrade, or prevent action described or assumed in any accident described in the PVNGS UFSAR from being performed since the other trains of AFW are required to be operable, 4) the proposed amendment does not alter any assumptions previously made in evaluating radiological consequences, and 5) the proposed amendment does not affect the integrity of any fission product barrier. No other safety related equipment is affected by the proposed change. Therefore, this proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

No. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment to Technical Specification 3.7.5 would allow a 7 day Completion Time for Condition A for the turbine-driven Auxiliary Feedwater (AFW) pump if the inoperability occurs in MODE 3 following a refueling outage, if MODE 2 had not been entered. Extending the Completion Time does not create the possibility of a new or different kind of accident from any accident previously evaluated because: 1) the proposed amendment does not represent a change to the system design, 2) the proposed amendment does not alter how equipment is operated or the ability of the system to deliver the required AFW flow, and 3) the proposed amendment does not affect any other safety related equipment. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

No. The proposed amendment does not involve a significant reduction in a margin of safety.

The PVNGS safety analysis credits essential Auxiliary Feedwater (AFW) pump delivery of 650 gpm at a steam generator pressure of 1270 psia or equivalent at the steam generator entrance for design basis accidents. The AFW System Design Basis Manual (AF), Revision 11, states that these pumps are designed to supply 750 gpm. The proposed

equivalent at the steam generator entrance for design basis accidents. The AFW System Design Basis Manual (AF), Revision 11, states that these pumps are designed to supply 750 gpm. The proposed amendment to Technical Specification 3.7.5 would allow a 7 day Completion Time for Condition A for the turbine-driven AFW pump if the inoperability occurs in MODE 3 following a refueling outage, if MODE 2 had not been entered. Extending the Completion Time does not involve a significant reduction in a margin of safety because: 1) during a return to power operations following a refueling outage, decay heat is at its lowest levels, 2) the other essential and non-essential AFW trains are required to be OPERABLE when MODE 3 is entered, 3) the essential motor-driven AFW train can provide sufficient flow to remove decay heat and cool the unit to Shutdown Cooling system entry conditions from power operations, and 4) the non-essential motor-driven AFW train is designed to supply sufficient water to remove decay heat with steam generator pressure at no load conditions to cool the unit to Shutdown Cooling entry conditions.

Based on the responses to these three criteria, APS has concluded that the proposed amendment involves no significant hazard consideration.

F. ENVIRONMENTAL CONSIDERATION

APS has determined that the proposed amendment involves no changes in the amount or type of effluent that may be released offsite, and results in no increase in individual or cumulative occupational radiation exposure. As described above, the proposed TS amendment involves no significant hazards consideration and, as such, meets the eligibility criteria for categorical exclusion set forth in 10CFR 51.22(c)(9).

G. REVISED TECHNICAL SPECIFICATIONS PAGE

Attachment 1 Units 1, 2, and 3: Page 3.7.5-1

H. RETYPE TECHNICAL SPECIFICATION PAGE

Attachment 2 Units 1, 2, and 3: Page 3.7.5-1

ATTACHMENT 1
REVISED TECHNICAL SPECIFICATIONS PAGE

Units 1, 2, and 3: Page 3.7.5-1

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

-----NOTE-----
Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 <u>Affected equipment</u> Restore steam supply to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.	B.1 Restore AFW train to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO

Insert

OR

----- NOTE -----
Only applicable if MODE 2 has not been entered following refueling

One turbine driven AFW pump inoperable in MODE 3 following refueling

(continued)

ATTACHMENT 2
RETYPE TECHNICAL SPECIFICATION PAGE

Units 1, 2, and 3: Page 3.7.5-1

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

-----NOTE-----
Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One steam supply to turbine driven AFW pump inoperable.</p> <p><u>OR</u></p> <p>-----NOTE----- Only applicable if MODE 2 has not been entered following refueling. -----</p> <p>One turbine driven AFW pump inoperable in MODE 3 following refueling.</p>	<p>A.1 Restore affected equipment to OPERABLE status.</p>	<p>7 days</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>
<p>B. One AFW train inoperable for reasons other than Condition A in MODE 1, 2, or 3.</p>	<p>B.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours</p> <p><u>AND</u></p> <p>10 days from discovery of failure to meet the LCO</p>

(continued)