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 STEWART, W.L. Arizona Public Service Co. (formerly Arizona Nuclear Power
 RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Application for amends to licenses NPF-41, NPF-51 & NPF-74,
 modifying TS 3/4.8.1 for purposes of implementing
 recommended changes from NUREG-1432, GL 94-01 & GL 96-05.

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10 CFR 50.90

WILLIAM L. STEWART
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-03632-WLS/AKK/KR
March 22, 1996

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-37
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- References: 1) Letter 102-03293, dated March 24, 1995, "Proposed Amendment to Technical Specification Section 3/4.8.1," from W. L. Stewart, Executive Vice President - Nuclear, APS, to USNRC
- 2) Letter 102-03472, dated September 10, 1995, "Modifications to the Proposed Amendment to Technical Specification Section 3/4.8.1," from W. L. Stewart, Executive Vice President - Nuclear, APS, to USNRC,

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
Modifications to the Proposed Amendment to
Technical Specification Section 3/4.8.1**

In Reference 1, Arizona Public Service Company (APS) proposed modifications to Technical Specification Section 3/4.8.1 for the purposes of implementing recommended changes from NUREG 1432, "Standard Technical Specifications for Combustion Engineering Plants," Generic Letter (GL) 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators," and Generic Letter (GL) 93-05, "Line-Item Technical Specification Improvements to Reduce Surveillance Requirements for Testing During Power Operation." In Reference 2, APS proposed modifications to the proposal. Through recent conversations with the staff, APS has determined that additional modifications to the previous submittals are required to facilitate review and approval of the proposed amendment.

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Modifications to the Proposed Amendment to Technical Specification Section 3/4.8.1

Page 2

Provided in Enclosure 1 to this letter are the following sections which support the proposed modification to the Technical Specification (TS) amendment:

- A. Description of the Modifications to the Proposed Amendment to Technical Specification 3/4.8.1
- B. Safety Analysis for the Proposed Technical Specification Amendment Request
- C. No Significant Hazards Consideration Determination
- D. Environmental Impact Determination

Enclosure 2 provides the marked-up TS pages to support the proposed amendment.

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

In accordance with Technical Specification Section 6.5, the Plant Review Board and the Offsite Safety Review Committee have reviewed and concurred with this request.

Due to the complex nature of the proposed amendment, APS requests 120 days from issuance of the amendment for implementation.

Should you have any questions, please contact Scott A. Bauer at (602) 393-5978.

Sincerely,




WLS/AKK/DRL/rv
Enclosures

cc: L. J. Callan (all w/enclosures)
K. E. Perkins
B. E. Holian
K. E. Johnston
A. V. Godwin (ARRA)

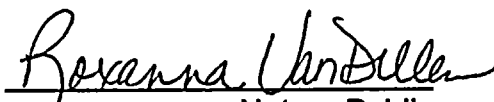
STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, W. L. Stewart, represent that I am Executive Vice President - Nuclear, 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.



W. L. Stewart

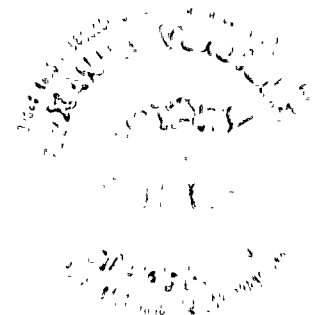
Sworn To Before Me This 26 Day Of March, 1996.



Notary Public

My Commission Expires

My Commission Expires June 12, 1997





ENCLOSURE 1

Modification to the

Proposed Amendment to

Technical Specification

Section 3/4.8.1

A. Description of Modifications to the Proposed Amendment to Technical Specification 3/4/8.1

1. Replaced proposed SR 4.8.1.1.2.b with:

At least once per 31 days by verifying the fuel oil transfer system operates to automatically transfer fuel oil from the storage tank to the day tank.

The frequency of this surveillance is being reduced from the frequency required by the ASME XI program to 31 days.. This frequency was determined in accordance with NUREG-1432.

2. Replace Note 2 on proposed page 3/4 8-3 with:

Performance of 4.8.1.1.2.c satisfies this SR.

A fuel limited EDG start may be used for the SR as recommended by the manufacturer. When the fuel limited start procedure is not used, the time, voltage, and frequency tolerances of 4.8.1.1.2.c must be met.

All EDG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading as recommended by the manufacturer.

The previous wording of "slow start" is being changed to "fuel limited" to better describe the method utilized. "Slow starts," in accordance with manufacturer's recommendations, are permitted in NUREG-1432 and GL 84-15.

3. Revise proposed SR 4.8.1.1.2.c as follows:

Replace the word "maintains" with "subsequently achieves" and add "Following the EDG start, perform SR 4.8.1.1.2.a.3" as the last sentence. Revise Note 1 of proposed page 3/4 8-4 to add "All EDG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading as recommended by the manufacturer."

Changing the wording from "maintains" to "subsequently achieves" does not change the intent of the proposed SR. The addition of guidance to perform SR 4.8.1.1.2.a.3 is editorial only. The addition of the prelube permissive is consistent with NUREG-1432.

4. Revise proposed SR 4.8.1.1.2.d.5.c as follows:

After the word "starts" add "from normal standby condition."

This is consistent with NUREG-1432.

5. Replace proposed ACTION 3.8.1.3.1.b with:

With either EDG fuel oil storage system with stored fuel oil viscosity not within limits, restore fuel oil to within limits within 30 days or declare the associated EDG inoperable.¹

The Current Technical Specification SR 4.8.1.1.2.b requires verification of water, sediment, and viscosity. NUREG-1432 requires a 30-day action if viscosity is not within specification.

6. Add new ACTION 3.8.1.3.1.c as follows:

With either EDG fuel oil storage system with stored fuel oil water and sediment not within limits, immediately declare the associated EDG inoperable.¹

The Current Technical Specification SR 4.8.1.1.2.b requires verification of water, sediment, and viscosity. NUREG-1432 requires that the EDG be declared immediately inoperable if water and sediment do not meet specifications.

7. Replace the first paragraph of proposed Bases SURVEILLANCE REQUIREMENTS on page B 3/4 8-9 with:

The surveillance requirements for demonstrating OPERABILITY of the emergency diesel generators (EDG) are based on the recommendations of Regulatory Guide (RG) 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," Revision 3, unless otherwise noted in the Updated FSAR, Section 1.8.

The previous submittals committed to revising UFSAR Section 1.8 to include and clarify APS' commitment to RG 1.9. This change is editorial only.

8. Replace the second paragraph of proposed Bases SURVEILLANCE REQUIREMENTS on page B 3/4 8-9 with:

All planned EDG starts may be preceded by an engine prelube period as recommended by the manufacturer in order to minimize wear and tear on the EDGs during testing. The EDG capabilities (starting and loading) are required to be met from a variety of initial conditions such as EDG in standby with the engine hot (SR 4.8.1.1.2.d.8), EDG in standby with the engine at normal standby conditions (SR 4.8.1.1.2.c and SR 4.8.1.1.2.d.5.c), and EDG operating in a particular test mode (SR 4.8.1.1.2.d.10). Although it is expected that most EDG starts will be performed from normal standby conditions, EDG starts, except as specified in the SR, may be performed with the jacket water cooling and lube oil temperatures within the lower to upper limits of EDG OPERABILITY. Lube oil and jacket water cooling within manufacturer's

recommended temperatures constitutes normal standby condition. Rapid cooling of the EDG down to normal standby conditions should be minimized.

References to the SRs which require specific starting conditions were added. This is an editorial change only.

9. Replace the second paragraph of proposed Bases for SR 4.8.1.1.2.a.2 with:

In order to reduce stress and wear on diesel engines, the EDG may be tested using a fuel limited start as opposed to a fast start (≤ 10 seconds) during the 31 day SR. A fuel limited start is an EDG start in which the amount of fuel is temporarily restricted during the start to cause a more gradual acceleration to rated frequency and voltage than would occur during a start in Emergency Mode. The fast start is required to be performed during the 184-day SR. Reducing fast starts would avoid premature wear of the engine and lead to greater EDG reliability and availability. The change is consistent with GL 84-15 recommendations for changes to the TS to reduce the number of fast starts and improve reliability. Performing the fast start test every 184 days will adequately demonstrate the EDG's present level of reliability and availability. However, if a fuel limited start is not used, the time, voltage, and frequency tolerances of SR 4.8.1.1.2.c must be met.

Generic Letter 84-15 and NUREG 1432 contain provisions for "slow starts" to minimize wear on the EDG. The PVNGS method for implementing "slow starts" is to minimize the fuel supplied to the EDG. The terminology used (i.e., "fuel limited start") is, therefore, editorial in nature.

10. Add the following after the first paragraph of proposed Bases for SR 4.8.1.1.2.b:

An OPERABLE fuel oil transfer system is required to ensure that the 7 days of inventory of fuel in the fuel storage system is capable of being transferred to the fuel oil day tank for utilization by the EDGs.

This is an editorial change only. Application of the CTS considers the fuel oil transfer system as a support system for EDG operability.

11. Replace the second paragraph of proposed Bases for SR 4.8.1.1.2.b with:

The frequency is based upon the rate of full load fuel oil consumption, the level control system, and the fuel oil transfer pump capability which transfers approximately hourly during full load operation.

The proposed Bases is based upon guidance contained in NUREG 1432.

12. Relocated and reworded the following sentence from SR 4.8.1.1.2.c to the second paragraph of proposed Bases SURVEILLANCE REQUIREMENTS on page B 3/4 8-9:

"If a plant normally has in operation prewarm systems designed to maintain lube oil and jacket water cooling at certain temperatures, this would constitute normal standby conditions."

Reworded as "Lube oil and jacket water cooling within manufacturer's recommended temperatures constitutes normal standby condition."

The proposed Bases is based upon guidance contained in NUREG 1432.

13. Revise proposed Bases for SR 4.8.1.1.2.d as follows:

Delete "RG 1.108 and" from the first paragraph.

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

14. Add to the second paragraph of proposed Bases for SR 4.8.1.1.2.d.2:

Administrative limits have been placed upon the Class 1E 4160 V buses due to high voltage concerns. As a result, power factors deviating much from unity are currently not possible when the EDG is running parallel to the grid. To the extent practicable, VARs will be provided by the EDG during this SR.

Clarification of testing within the power factor range of 0.8 to 0.9 will be addressed in UFSAR Section 1.8.

15. Revise proposed Bases for SR 4.8.1.1.2.d.3 as follows:

Change the reference of "RG 1.108, paragraph 2.a(1)" to "RG 1.9, paragraph 2.2.4."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

16. Revise proposed Bases for SR 4.8.1.1.2.d.7 as follows:

Change the reference of "RG 1.108, paragraph 2.a(3)" to "RG 1.9, paragraph 2.2.9."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

17. Revise proposed Bases for SR 4.8.1.1.2.d.8 as follows:

Change the reference of "RG 1.108, paragraph 2.a(5)" to "RG 1.9, paragraph 2.2.10."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

18. Revise proposed Bases for SR 4.8.1.1.2.d.9 as follows:

Change the reference of "RG 1.108, paragraph 2.a(6)" to "RG 1.9, paragraph 2.2.11."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

19. Revise proposed Bases for SR 4.8.1.1.2.d.10 as follows:

Change the reference of "RG 1.108, paragraph 2.a(8)" to "RG 1.9, paragraph 2.2.13."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

20. Revise proposed Bases for SR 4.8.1.1.2.d.11 as follows:

Change the reference of "RG 1.108, paragraph 2.a(2)" to "RG 1.9, paragraph 2.2.4."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

21. Revise proposed Bases for SR 4.8.1.1.2.e as follows:

Change the reference of "RG 1.108, paragraph 2.b" to "RG 1.9, paragraph 2.3.2.4."

RG 1.108 has been withdrawn and incorporated into RG 1.9, Revision 3.

22. Replace proposed Bases 3/4.8.1.3 ACTION b as follows:

With the stored fuel oil viscosity not within the required limits, a period of 30 days is allowed for restoration. This restoration may involve feed and bleed procedures, filtering, or combinations of these procedures. Even if an EDG start and load was required during the 30 day frequency and the fuel oil viscosity was outside its limits, there is a high likelihood that the EDG would still be capable of performing its intended function. With the required ACTION and associated completion time not met, the associated EDG may be

incapable of performing its intended function and must be immediately declared inoperable.

The 30-day completion time for viscosity being out of specification is consistent with NUREG-1432.

23. Add new Bases 3/4.8.1.3 ACTION c as follows:

With the stored fuel oil water and sediment not within the required limits, the associated EDG may not be capable of performing its intended function and must be immediately declared inoperable.

This new action was added to be consistent with NUREG 1432 and RG 1.137 which requires immediate inoperability due to water or sediment exceeding specifications.

24. Replace proposed Bases for SR 4.8.1.3.1.2 with the following:

SR 4.8.1.3.1.2 ensures the availability of high quality fuel oil for the EDGs. The frequency of this test (92 days) takes into consideration the low humidity and infrequent rainfall at the site and is an exception to RG 1.137, Revision 1, October 1979, Position C.2.

This Bases was revised to reflect the frequency as being derived from the PVNGS deviation from RG 1.137 rather than basing the frequency on ASME XI requirements.

25. Delete reference to RG 1.9, Revision 0 from Reference 5 on proposed page B 3/4 8-21.

RG 1.9, Revision 3 is utilized in establishing the TSs, SRs, and Bases.

26. Revise "[1978]" on Reference 10 of proposed page B 3/4 8-21 to "1974, IEEE Standard Criteria for Class 1E Power Systems for Nuclear Generating Stations."

UFSAR Chapter 8, references IEEE 308-1974.

27. Delete RG 1.108 Rev 1 on proposed page B 3/4 8-21 and renumber the remaining references.

RG 1.108 was withdrawn and incorporated into RG 1.9, Revision 3.

28. Letter 102-03293-WLS/AKK/KR (Reference 1) relocated current SR 4.8.1.1.2.d.9 to a calculation but did not evaluate the SR against the criteria provided by the Commission in 10 CFR 50.36(c)(2)(ii). APS has evaluated the SR against the criteria provided and finds that the SR does not meet one or more of the criteria. Therefore, relocation of the SR is acceptable.

B. Safety Analysis for the Proposed Technical Specification Amendment Request

There is no change to the Safety Analysis submitted in reference 1 due to the changes proposed in this submittal. The original submittal utilized the recommendations of NUREG 1432, GL 94-01 and GL 93-05 to implement line item improvements to Technical Specification 3/4.8.1. This submittal remains consistent with the intent of the NUREG 1432, GL 94-01, and GL 93-05.

C. No Significant Hazards Consideration Determination

There is no change to the No Significant Hazards Consideration Determination submitted in Reference 1 due to the changes proposed in this submittal.

D. Environmental Impact Determination

There is no change to the Environmental Impact Determination submitted in Reference 1 due to the changes proposed in this submittal.

ENCLOSURE 2

Marked-Up Technical Specification Pages

for the

Proposed Amendment

INDEX PAGE

