

July 8, 1988

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JULY 25, 1988

Docket No. STN 50-530

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Mr. E. E. Van Brunt, Jr.  
Executive Vice President  
Arizona Nuclear Power Project  
Post Office Box 52034  
Phoenix, Arizona 85072-2034

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Dear Mr. Van Brunt:

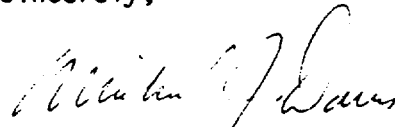
SUBJECT: ISSUANCE OF AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO. NPF-74 FOR THE PALO VERDE NUCLEAR GENERATING STATION, UNIT 3 (TAC NO. 67865)

The Commission has issued the subject Amendment, which is enclosed, to the Facility Operating License for Palo Verde Nuclear Generating Station, Unit 3. The Amendment consists of a change to the Technical Specifications (Appendix A to the license) in response to your application transmitted by letter dated April 7, 1988.

The Amendment revises the Technical Specifications for Palo Verde Unit 3, as follows. Technical Specification 3/4.1.1.3 provides limits on the Moderator Temperature Coefficient (MTC). The Amendment revises Figure 3.1-1 to increase the negative MTC limit from -30 pcm/°F to -35 pcm/°F.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,



Michael J. Davis, Project Manager  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects

Enclosures

1. Amendment No.9 to NPF-74
2. Safety Evaluation

cc: See next page

DRSP/PDV	DRSP/PDV
MJDavis:dr	JLee
5/13/88	6/14/88

OGC	DRSP/PDV
MJL	GNK
6/23/88	7/8/88



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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

July 8, 1988

Docket No. STN 50-530

Mr. E. E. Van Brunt, Jr.  
Executive Vice President  
Arizona Nuclear Power Project  
Post Office Box 52034  
Phoenix, Arizona 85072-2034

Dear Mr. Van Brunt:

SUBJECT: ISSUANCE OF AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO.  
NPF-74 FOR THE PALO VERDE NUCLEAR GENERATING STATION, UNIT 3  
(TAC NO. 67865)

The Commission has issued the subject Amendment, which is enclosed, to the Facility Operating License for Palo Verde Nuclear Generating Station, Unit 3. The Amendment consists of a change to the Technical Specifications (Appendix A to the license) in response to your application transmitted by letter dated April 7, 1988.

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A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script that reads "Michael J. Davis".

Michael J. Davis, Project Manager  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects

Enclosures

1. Amendment No. 9 to NPF-74
2. Safety Evaluation

cc: See next page

Mr. E. E. Van Brunt, Jr.  
Arizona Nuclear Power Project

Palo Verde

cc:

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Walnut Creek, California 94596

Arizona Nuclear Power Project

- 2 -

Palo Verde

cc:

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Arizona Corporation Commission  
Post Office Box 6019  
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Arizona Radiation Regulatory Agency  
ATTN: Ms. Clara Palovic, Librarian  
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Phoenix, Arizona 85040

Mr. Charles Tedford, Director  
Arizona Radiation Regulatory Agency  
4814 South 40 Street  
Phoenix, Arizona 85040

Chairman  
Maricopa County Board of Supervisors  
111 South Third Avenue  
Phoenix, Arizona 85003



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET. AL.

DOCKET NO. STN 50-530

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 9  
License No. NPF-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment, dated April 7, 1988, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.


2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-74 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 9, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance. The changes in the Technical Specifications are to become effective within 30 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licenses shall adhere to the Technical Specifications existing at the time. The period of time during changeover shall be minimized.

FOR THE NUCLEAR REGULATORY COMMISSION

  
George W. Knighton, Director  
Project Directorate V  
Division of Reactor Projects - III,  
IV, V and Special Projects

Enclosure  
Change to the Technical  
Specifications

Date of Issuance: July 8, 1988

ENCLOSURE TO LICENSE AMENDMENT

AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO. NPF-74

DOCKET NO. STN 50-530

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. Also to be replaced is the following overleaf page to the amended page.

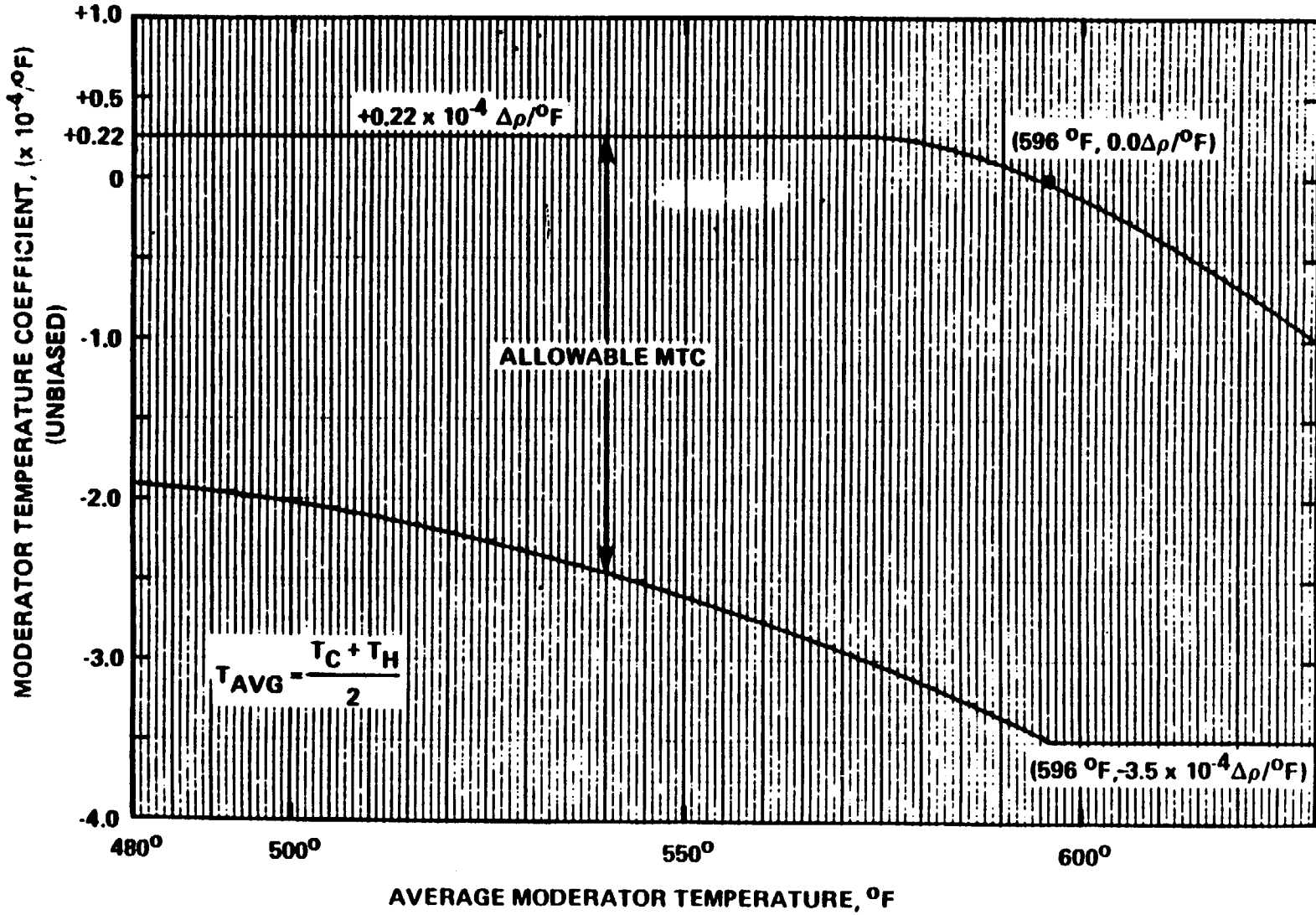
Amendment Page

3/4 1-5

Overleaf Page

3/4 1-6

FIGURE 3.1-1  
ALLOWABLE MTC MODES 1 AND 2  
PALO VERDE UNIT 3 CYCLE 1





## MINIMUM TEMPERATURE FOR CRITICALITY

### LIMITING CONDITION FOR OPERATION

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3.1.1.4 The Reactor Coolant System lowest operating loop temperature ( $T_{\text{cold}}$ ) shall be greater than or equal to 552°F.

APPLICABILITY: MODES 1 and 2#\*.

ACTION:

With a Reactor Coolant System operating loop temperature ( $T_{\text{cold}}$ ) less than 552°F, restore  $T_{\text{cold}}$  to within its limit within 15 minutes or be in HOT STANDBY within the next 15 minutes.

### SURVEILLANCE REQUIREMENTS

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4.1.1.4 The Reactor Coolant System temperature ( $T_{\text{cold}}$ ) shall be determined to be greater than or equal to 552°F:

- a. Within 15 minutes prior to achieving reactor criticality, and
- b. At least once per 30 minutes when the reactor is critical and the Reactor Coolant System  $T_{\text{cold}}$  is less than 557°F.

---

#With  $K_{\text{eff}}$  greater than or equal to 1.0.

\*See Special Test Exception 3.10.5.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO. NPF-74,  
ARIZONA PUBLIC SERVICE COMPANY, ET. AL.  
PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 3

1.0 INTRODUCTION

By letter dated April 7, 1988, the Arizona Public Service Company (APS) on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power and Southern California Public Power Authority (licensees), requested a change to the Technical Specifications for Palo Verde Nuclear Generating Station, Unit 3 (Appendix A to Facility Operating License No. NPF-74). The application requested a change to revise Technical Specification 3/4.1.1.3 by changing Figure 3.1-1 to increase the negative Moderator Temperature Coefficient (MTC) limit from  $-30 \text{ pcm}/^{\circ}\text{F}$  to  $-35 \text{ pcm}/^{\circ}\text{F}$ .

2.0 DISCUSSION

The licensees state that during initial testing on PVNGS Unit 1, a concern was raised over the location of the safety injection line drains and the effect on safety analysis assumptions. The larger dilution volume which resulted was compensated for by using a reduced value of MTC ( $-30 \text{ pcm}/^{\circ}\text{F}$ ) in the Steam Line Break Analysis. A change request was submitted for Unit 1 to reduce the lower MTC limit from  $-35 \text{ pcm}/^{\circ}\text{F}$  to  $-30 \text{ pcm}/^{\circ}\text{F}$  to reflect the new safety analysis assumption, but the drain line was relocated prior to NRC approval of the change and the TS change request was withdrawn.

The MTC limit of  $-30 \text{ pcm}/^{\circ}\text{F}$  was incorporated in the initial Units 2 and 3 TS under the assumption that the drain line relocation for Units 2 and 3 would occur at the first refueling outage. In reality, the drain line relocation was performed for Units 2 and 3 during initial start-up for each unit. The Unit 2 limit was changed back to  $-35 \text{ pcm}/^{\circ}\text{F}$  as part of the Unit 2 Cycle 2 reload TS. This change is necessary to change the Unit 3 TS limit back to the original value assumed in the safety analysis ( $-35 \text{ pcm}/^{\circ}\text{F}$ ).

3.0 EVALUATION

The TS limit on MTC was determined from the CE System 80 steam line break analysis. In the analysis, an assumed moderator reactivity versus coolant temperature function was applied using the most negative (including uncertainties) technical specification moderator temperature coefficient of  $-35 \text{ pcm}/^{\circ}\text{F}$  at nominal full power conditions,  $T_{\text{avg}} = 594^{\circ}\text{F}$ .

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PDR ADOCK 05000530  
P PDC

The current MTC limit of -30 pcm/°F in the Unit 3 TS was required to compensate for the as-built safety injection drain line configuration. Subsequently the drain lines were reconfigured so that the MTC limit of -35 pcm/°F that was assumed in the safety analyses would be valid.

The licensees have reevaluated the most limiting transients and accidents which can be adversely affected by the increased MTC operating band and found them to be bounded by the existing Chapter 15 analyses.

The steam line break analysis and the assumptions used in the analysis were found acceptable by the staff in the Safety Evaluation Report for the CESSAR System 80 design, NUREG-0852, Supplement No. 2, September 1983.

Based on the above, the staff concludes that the proposed change to Specification 3/4.1.1.3 is acceptable.

#### 4.0 CONTACT WITH STATE OFFICIAL

The Arizona Radiation Regulatory Agency has been advised of the proposed determination of no significant hazards consideration with regard to this change. No comments were received.

#### 5.0 ENVIRONMENTAL CONSIDERATIONS

This amendment involves a change in the installation or use of facility components located within the restricted area as defined in 10 CFR 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued proposed findings that the amendment involves no significant hazards consideration, and there has been no public comment on such findings. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need to be prepared in connection with the issuance of this amendment.

#### 6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public. We, therefore, conclude that the proposed change is acceptable.

Principal Contributor: M. Davis

Dated: July 8, 1988