



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analysis assumption, but the drain line was relocated prior to NRC approval of the change and the TS change request was withdrawn.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, $T_{\text{avg}} = 594^\circ\text{F}$.

The current MTC limit of $-30 \text{ pcm}/^{\circ}\text{F}$ 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 $-35 \text{ pcm}/^{\circ}\text{F}$ 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.

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Dated: July 8, 1988