



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 69 TO FACILITY OPERATING LICENSE NO. NPF-41,
AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NO. NPF-51,
AND AMENDMENT NO. 42 TO FACILITY OPERATING LICENSE NO. NPF-74
ARIZONA PUBLIC SERVICE COMPANY, ET AL.
PALO VERDE NUCLEAR GENERATING STATION, UNIT NOS. 1, 2, AND 3
DOCKET NOS. STN 50-528, STN 50-529, AND STN 50-530

1.0 INTRODUCTION

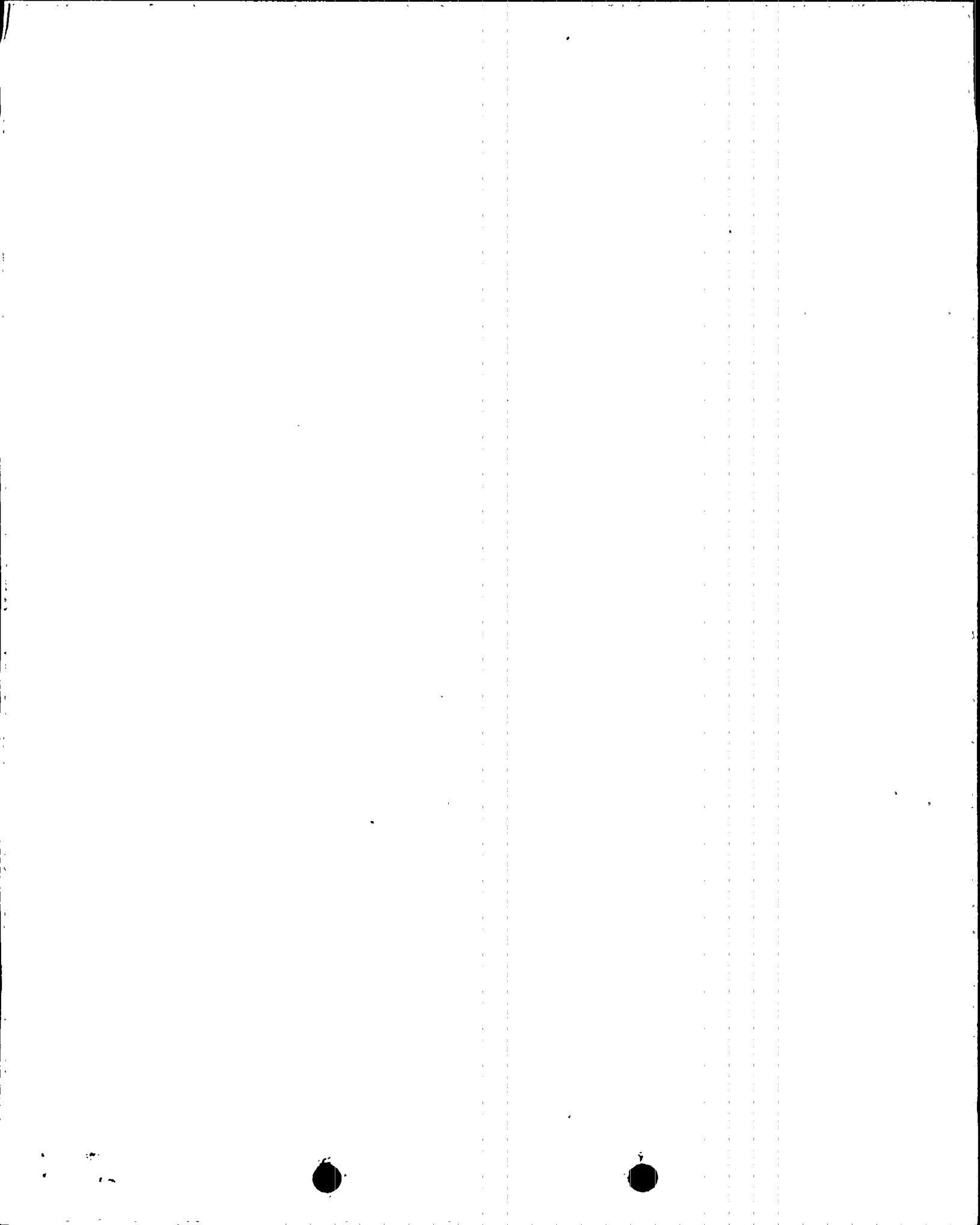
By letter dated March 19, 1992, the Arizona Public Service Company (APS or the licensee) submitted a request for changes to the Technical Specifications (TS) for the Palo Verde Nuclear Generating Station, Units 1, 2, and 3 (Appendix A to Facility Operating License Nos. NPF-41, NPF-51, and NPF-74, respectively). The Arizona Public Service Company submitted this request 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. The proposed changes would relocate certain fuel-cycle-specific parameters from the technical specifications to a unit-specific Core Operating Limits Report (COLR), as provided for in NRC Generic Letter (GL) 88-16.

2.0 EVALUATION

The proposed changes to the TS are in accordance with the guidance provided by GL 88-16 and are addressed below.

- (1) The definition section of the TS was modified to include a definition of the COLR that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with NRC-approved methodologies that maintain the limits of the safety analysis. The definition notes that plant operation within these limits is addressed by individual specifications.
- (2) The following specifications were revised to replace the values of cycle-specific parameter limits with reference to the COLR that provides these limits.

9301070171 921230
PDR ADOCK 05000528
P PDR



(a) Specification 3.1.1.2

Shutdown margin limits for this specification are specified in the COLR.

(b) Specification 3.1.1.3

The moderator temperature coefficient (MTC) limits for this specification are specified in the COLR, except that the upper limits on positive moderator temperature coefficient have been retained without change. This modification to the licensee's proposed change was discussed and agreed to by the licensee and is based on the NRC staff's desire to explicitly approve any changes in positive moderator coefficient that could have an adverse impact on previously reviewed analyses for anticipated transients without scram (ATWS).

(c) Specification 3.1.2.7

The boron dilution alarm limits for this specification are specified in the COLR.

(d) Specification 3.1.3.1

The core power limits for the moveable control rod assemblies-CEA position deviation are specified in the COLR.

(e) Specifications 3.1.3.6 and 3.1.3.7

The regulating CEA insertion limits and part-length CEA insertion limits for these specifications are specified in the COLR.

(f) Specification 3.2.1

The linear heat rate limit for this specification is specified in the COLR.

(g) Specification 3.2.3

The maximum tilt limits for this specification are specified in the COLR.

(h) Specification 3.2.4

The DNBR margin related limits for this specification are specified in the COLR.

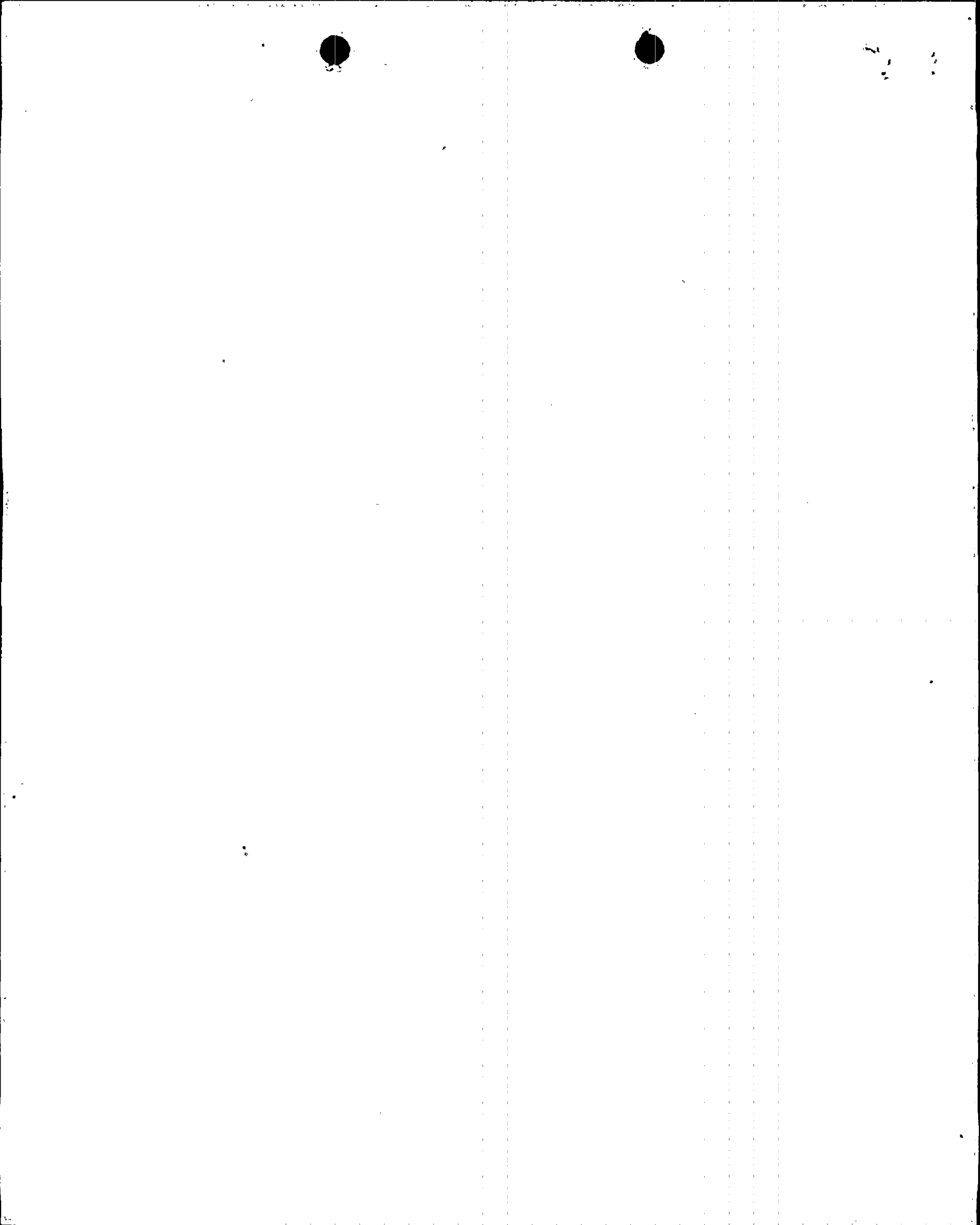
(i) Specification 3.2.7



The axial shape index range limits for this specification are specified in the COLR.

The bases of affected specifications have been modified by the licensee to include appropriate reference to the COLR. Based on our review, we conclude that the changes to these bases are acceptable.

- (3) Specification 6.9.1.9 is revised to include the COLR under the reporting requirements of the Administrative Control section of the TS. This specification requires that the COLR be submitted, upon issuance, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector. The report provides the values of cycle-specific parameter limits that are applicable for the current fuel cycle. Furthermore, this specification requires that the NRC-approved methodologies be used in establishing the values of these limits for the relevant specifications and that the values be consistent with all applicable limits of the safety analysis. The approved methodologies are the following:
- (a) CENPD-190-A, "C-E Method for Control Element Assembly Ejection Analysis," January, 1976 (Methodology for Specification 3.1.3.6 regulating CEA insertion limits).
 - (b) CENPD-266-P-A, "The ROCS and DIT Computer Codes for Nuclear Design," April, 1983 (Methodology for Specifications 3.1.1.2 shutdown margin K_{eff} - any CEA withdrawn, 3.1.1.3 moderator temperature coefficient BOL and EOL limits and 3.1.3.6 regulating CEA insertion limits).
 - (c) CENPD-153-P, Revision 1-P-A, "INCA/CECOR Power Peaking Uncertainty," May, 1980.
 - (d) NUREG-0852, "Safety Evaluation Report Related to the Final Design of the Standard Nuclear Steam Supply Reference Systems CESSAR System 80, Docket No. STN 50-470," November 1981; Supplement No. 1, March 1983; No. 2, September 1983; No. 3, December 1987.
 - (e) CEN-356(V)-P-A, Revision 01-P-A, "Modified Statistical Combination of Uncertainties," May, 1988 (Methodology for Specification 3.2.4 DNBR Margin and Axial Shape Index).
 - (f) CENPD-132-P, "Calculations Methods for the C-E Large Break LOCA Evaluation Model," August 1974; Supplement No. 1, February 1975; No. 2, July 1975 (Methodology for Specification 3.2.1 Linear Heat Rate).
 - (g) CENPD-137-P, "Calculative Methods for the C-E Small Break LOCA Evaluation Model," August 1974; Supplement No. 1, January 1977 (Methodology for Specification 3.2.1 Linear Heat Rate).



Finally, the specification requires that all changes in cycle-specific parameter limits be documented in the COLR before each reload cycle or remaining part of a reload cycle and submitted upon issuance to NRC prior to operation with the new parameter limits. The licensee has identified the applicable specifications to be relocated to the COLR under each approved methodology cited above. This list was modified by the licensee at the request of the NRC staff to more particularly identify the approved methodology for each specification to be relocated to the COLR, and to list the NRC approval documents for each topical report where NRC approval was not obvious from the title of the report.

On the basis of the review, the NRC staff concludes that the licensee has provided an acceptable response to the items in GL 88-16 on modifying cycle-specific parameter limits in TS. Because plant operation continues to be limited in accordance with the values of cycle-specific parameter limits that are established using NRC-approved methodologies, the NRC staff concludes that this change has no impact on plant safety. Accordingly, the staff finds that the proposed changes are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arizona State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve 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 a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (57 FR 18169). In addition, the amendment changes recordkeeping or reporting requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission 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



1
2

activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: T. Huang

Date: December 30, 1992

