



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

EXEMPTION REQUESTS TO APPENDIX J TO 10 CFR PART 50

SOUTHERN CALIFORNIA EDISON COMPANY

SAN ONOFRE UNIT NO. 1

DOCKET NO. 50-206

INTRODUCTION

By our letter dated August 4, 1975, the NRC staff requested the Southern California Edison Company (licensee) to review San Onofre, Unit 1 in terms of current containment leakage testing practices and the associated Technical Specifications for compliance with the requirements of Appendix J to 10 CFR Part 50. As part of this request, the licensees were to determine the planned actions and associated schedule for attaining conformance with the above cited regulations.

Appendix J to 10 CFR 50 was published on February 14, 1973. Since many operating nuclear plants had either received an operating license or were in advanced stages of design or construction at that time, some plants may not be in full compliance with the requirements of this regulation. Therefore, beginning in August 1975, each licensee was requested to determine the extent to which their leak testing practices were in compliance with the requirements of Appendix J. Following the initial responses to these requests, staff positions were developed which would provide assurance that the objectives of the testing requirements of Appendix J would be satisfied. These positions have subsequently been used in our review of the submittal made by the San Onofre licensee. The results of our review are reflected in the following evaluation.

The licensee submitted an initial response on December 3, 1975. This submittal, Amendment No. 52, proposed modifications to the facility and changes to the Technical Specifications in conjunction with a containment design modification termed the Sphere Enclosure Project. In addition, some information relative to compliance with Appendix J was included in this Amendment. Additional information was submitted in a letter dated April 21, 1976.

EVALUATION

Section III.A.6(b) of Appendix J requires that if two consecutive containment integrated (Type A) leakage rate tests fail to meet the applicable acceptance criteria, a Type A test shall be conducted at each plant shutdown for refueling or approximately every 18 months, until two consecutive Type A tests meet the acceptance criteria, at which time the normal retest schedule shall be resumed

The licensee has requested an exemption from this requirement to permit testing at approximately 24 months intervals following any failure of two consecutive Type A tests. This request was based on projected intervals between major refueling outages.

The objective of Section III.A.6(b) of Appendix J is to shorten the Type A test frequency where excessive leakage is encountered, such that the necessary repairs can be performed to maintain the integrated leakage rate within acceptable limits. The exact frequency necessary to achieve this goal is a function of the rate of degradation of the containment leak tightness. Appendix J does not recognize a rate of degradation; rather, it requires that Type A tests be performed as often as practical (i.e., at each major refueling outage). Further, to avoid extending the test interval by prolonging the fuel cycle, Appendix J establishes a limit of approximately 18 months.

Since a change in the periodic retest schedule must reflect the rate of containment degradation, i.e., the past performance of the Type A tests, a general conclusion regarding the proposed exemption cannot be made at this time. Specific exemptions from the requirements of Section III.A.6(b) will be considered on a case-by-case basis. We conclude that this exemption request should be denied.

The Southern California Edison Company has proposed to leak test the containment airlocks every six months and after each opening or within 72 hours following the first of a series of openings during reactor operation. In addition, the licensee proposes to leak test the airlocks prior to criticality following a reactor shutdown, if the airlock was opened during the shutdown, with the exception of training startups and low power physics testing.

Leak testing the airlock within three days following the first of a series of openings is in conformance with the current provisions of Appendix J to CFR Part 50; hence, no exemption is required.

The licensee has proposed to exclude the airlock testing requirements during training startups and low power physics tests. However, containment integrity is required during these periods. Consistent with the rationale for leak testing, we will require that the airlock be leak tested whenever containment integrity is required. Accordingly, we conclude that the request for exemption to exclude airlock testing requirements during training startup and low power physics testing should be denied.