

UNITED STATES NUCLEAR REGULATORY COMMISSION  
ARIZONA PUBLIC SERVICE COMPANY, ET AL  
PALO VERDE NUCLEAR GENERATING STATION, UNIT 1  
DOCKET NO. STN 50-528  
ENVIRONMENTAL ASSESSMENT AND  
FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an Exemption from a portion of the requirements of General Design Criterion (GDC) 4 (10 CFR 50, Appendix A) to the Arizona Public Service Company, 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 (the licensees) for the Palo Verde Nuclear Generating Station, Unit 1, located at the licensees' site in Maricopa County, Arizona.

ENVIRONMENTAL ASSESSMENT:

Identification of Proposed Action: The Exemption would permit the licensees not to consider the dynamic effects and, hence, not require pipe whip restraints and jet impingement shields associated with postulated pipe breaks in the Palo Verde Unit 1 primary coolant system, on the basis of advanced calculational methods for assuring that piping stresses would not result in rapid piping failure; i.e., pipe breaks.

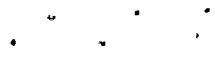
Need for Proposed Action: The proposed Exemption is required because GDC 4 requires that structures, systems and components important to safety shall be appropriately protected against dynamic effects including the effects of dis-

\*The Los Angeles Department of Water and Power will not actually become a co-owner until after Palo Verde Unit 1 achieves commercial operation.

charging fluids that may result from equipment failures, up to and including a double-ended rupture of the largest pipe in the reactor coolant system (Definition of LOCA). In recent submittals, the licensees have provided information to show by advanced fracture mechanics techniques that the detection of small flaws by either inservice inspection or leakage monitoring systems is assured long before flaws in the piping materials can grow to critical or unstable sizes which could lead to large break areas, such as the double-ended guillotine break or its equivalent. The NRC staff has reviewed and accepted the licensees' conclusion. Therefore, the NRC staff agrees that the double-ended guillotine break in the primary pressure coolant loop piping, and its associated dynamic effects, need not be required as a design basis accident for pipe whip restraints and jet impingement shields, i.e., the restraints and shields are not needed. Accordingly, the NRC staff agrees that an exemption from GDC 4 is appropriate.

Environmental Impact of the Proposed Action: The proposed Exemption would not affect the environmental impact of the facility. No credit is given for the barriers to be eliminated in calculating accident doses to the environment. While the jet impingement barriers would minimize the damage from jet forces from a broken pipe, the calculated limitation on stresses required to support this proposed Exemption assures that the probability of pipe breaks which could give rise to such forces are extremely small; thus, the pipe whip restraints and jet impingement shields would have no significant effect on the overall plant accident risk.

The proposed Exemption does not otherwise affect radiological plant effluents. Likewise, the relief requested does not affect non-radiological plant effluents, and has no other environmental impact. The elimination of the pipe whip



restraints and jet impingement shields would tend to lessen the occupational doses to workers inside containment. Therefore, the Commission concludes that there are no significant radiological or non-radiological impacts associated with this proposed Exemption.

The proposed Exemption involves design features located entirely within the restricted area as defined in 10 CFR 20. It does not affect plant non-radioactive effluents and has no other environmental impact. Therefore, the Commission concludes that there are no non-radiological impacts associated with this proposed Exemption.

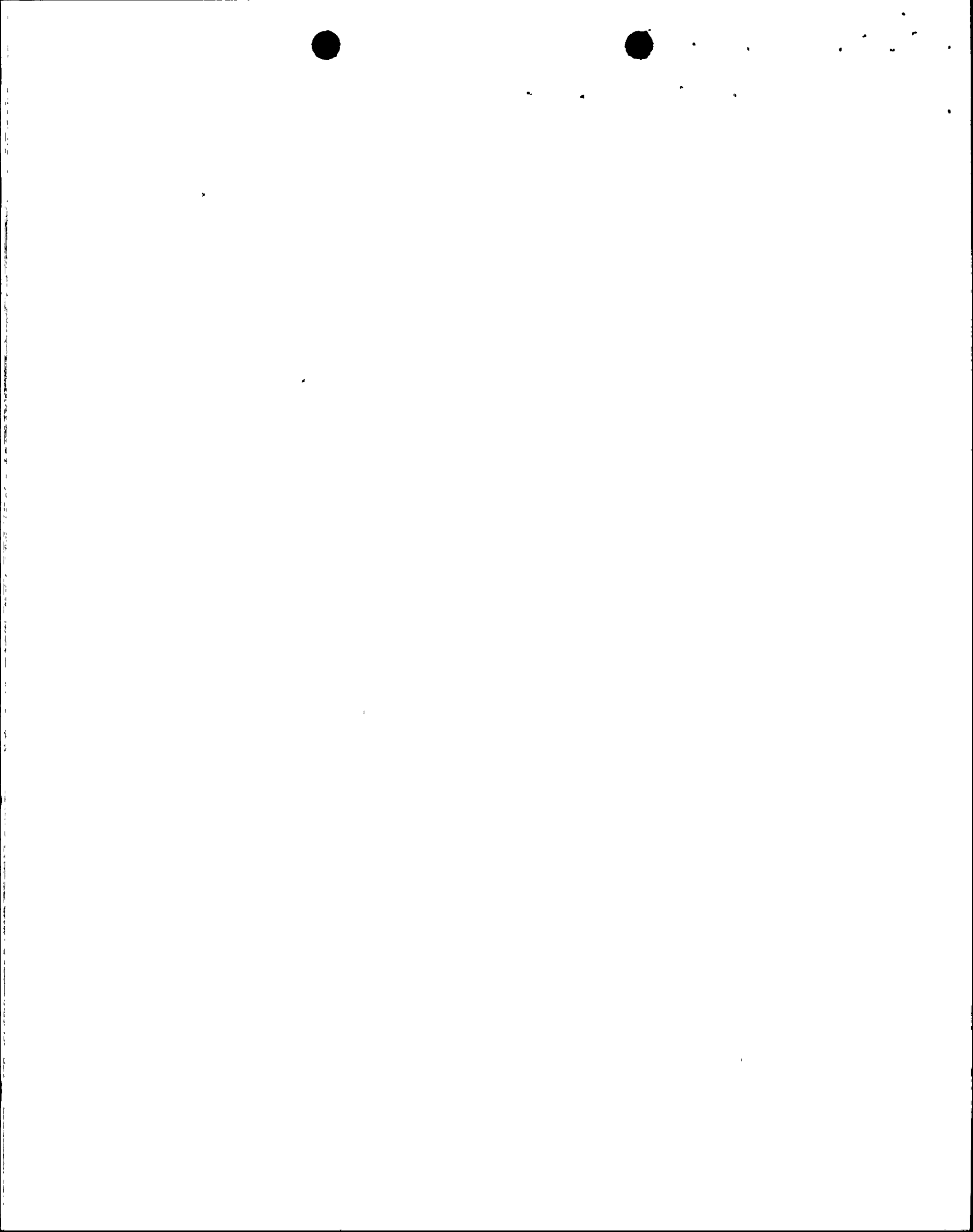
Since we have concluded that there are no measurable negative environmental impacts associated with this proposed Exemption, any alternatives would not provide any significant additional protection of the environment. The alternative to granting the Exemption would be to require literal compliance with GDC 4.

Alternative Use of Resources: This action does not involve the use of resources not previously considered in the Final Environmental Statement (Operating License Stage) for Palo Verde, Unit 1.

Agencies and Persons Contacted: The NRC staff reviewed the licensees' request and applicable documents referenced therein that support this proposed Exemption for Palo Verde, Unit 1. The NRC did not consult other agencies or persons.

#### FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for this action. Based upon the environmental assessment, we conclude that this action will not have a significant effect on the quality of the human environment.



For details with respect to this action, see the requests dated June 7, 1984, and November 13 and 15, 1985, and other information provided by Combustion Engineering, Inc., in letters dated June 14, 1983 and December 23, 1983, which are referenced by the licensees. These documents, utilized in the NRC staff's technical evaluation of the exemption request, are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Phoenix Public Library, Business, Science and Technology Department, 12 East McDowell Road, Phoenix, Arizona 85004. The staff's technical evaluation of the exemption request will be published with the exemption (if the exemption is granted) and will also be available for inspection at both locations listed above.

Dated at Bethesda, Maryland, this 20th day of November, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

DL:LB#3 *EA*  
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DL:LB#3 *JR for GW*  
GWKnighton  
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DL:AD/LC *TM*  
AMNovak  
11/20/85

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for the proper management of the organization's finances and for ensuring compliance with applicable laws and regulations.

2. The second part of the document outlines the specific procedures that should be followed when recording transactions. This includes the use of standardized forms and the requirement that all entries be supported by appropriate documentation, such as invoices and receipts.

3. The third part of the document addresses the issue of internal controls. It stresses that a robust system of internal controls is necessary to prevent errors and fraud, and to ensure that the organization's assets are protected.

4. The fourth part of the document discusses the role of the accounting department in providing accurate and timely financial information to management. It highlights the importance of regular reporting and the need for transparency in all financial matters.

5. The fifth part of the document concludes by reiterating the importance of adherence to these guidelines and the need for ongoing monitoring and improvement of the organization's financial reporting processes.

Approved: \_\_\_\_\_  
Date: \_\_\_\_\_

Accounting Department      Finance Department      Operations Department      Human Resources Department

REQUEST FOR A SCHEDULAR EXEMPTION FROM A PORTION OF GENERAL DESIGN CRITERION  
4 OF APPENDIX A TO CFR 50 REGARDING THE NEED TO ANALYZE LARGE PRIMARY LOOP PIPE  
RUPTURES AS A STRUCTURAL DESIGN BASIS FOR PALO VERDE NUCLEAR GENERATING STATION  
UNIT 1

Distribtution

~~Docket File 50-528~~

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