

UNITED STATES NUCLEAR REGULATORY COMMISSIONGEORGIA POWER COMPANY, ET. AL.DOCKET NOS.: 50-424 AND 50-425NOTICE OF ENVIRONMENTAL ASSESSMENT ANDFINDING 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 4 (10 CFR 50, Appendix A) to the Georgia Power Company, the Municipal Electric Authority of Georgia, the Oglethorpe Power Corporation and the City of Dalton, Georgia, (the applicants) for the Vogtle Electric Generating Plant, Units 1 and 2, located at the applicants' site in Burke County, Georgia.

ENVIRONMENTAL ASSESSMENT:

Identification of Proposed Action: The Exemption would permit eliminating the need to install the pipe whip restraints and jet impingement shields and their dynamic effects associated with postulated pipe breaks in eight locations per loop in the Vogtle, Units 1 and 2 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.

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Need for Proposed Action: The proposed Exemption is required because General Design Criterion (GDC) 4 requires that structures, systems and components important to safety shall be appropriately protected against dynamic effects including the effects of discharging 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 applicants 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 applicants' conclusion. Therefore, the NRC staff agrees that the double-ended guillotine break in the primary pressure coolant loop piping need not be required as a design basis accident for pipe whip restraints and jet shields, and their associated dynamic effects i.e., the restraints and jet 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 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 shields would have no significant effect on overall plant accident risk.

The Exemption does not otherwise affect radiological plant effluents. Likewise, the relief granted 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 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 measureable negative environmental impacts associated with this Exemption, any alternatives would not provide any significant additional protection of the environment. The alternative to the compliance 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 (construction permit) for Vogtle, Units 1 and 2.

Agencies and Persons Contacted: The NRC staff reviewed the applicants' request and applicable documents referenced therein that support this Exemption for Vogtle, Units 1 and 2. The NRC did not consult other agencies or persons.

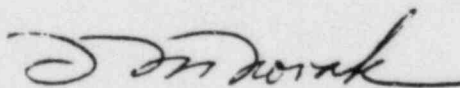
FINDING OF NO SIGNIFICANT IMPACT

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 request for exemption dated April 2, 1984, and additional information provided by the applicants in letters dated October 25, 1983, May 17, 1984, and December 21, 1984. 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 Burke County Public Library, 4th Street, Waynesboro, Georgia 30830. 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 25th day of January 1985.

FOR THE NUCLEAR REGULATORY COMMISSION



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