

January 25, 1988

Docket No.: 50-366

Mr. James P. O'Reilly  
Senior Vice President - Nuclear Operations  
Georgia Power Company  
P. O. Box 4545  
Atlanta, Georgia 30302

Dear Mr. O'Reilly:

Subject: Issuance of Environmental Assessment

Enclosed for your information is a copy of an Environmental Assessment and Finding of No Significant Impact related to your January 5, 1988, request for an exemption from the requirements of 10 CFR 50.62(c)(4) for the Hatch Nuclear Plant, Unit 2.

The assessment has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Lawrence P. Crocker, Project Manager  
Project Directorate II-3  
Division of Reactor Projects, I/II

Enclosure: As stated

cc w/enclosure: See next page

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UNITED STATES NUCLEAR REGULATORY COMMISSION

GEORGIA POWER COMPANY  
OGLETHORPE POWER CORPORATION  
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA  
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-366

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is issuing an exemption from the requirements of 10 CFR 50.62(c)(4) to Georgia Power Company (the licensee) for the Edwin I. Hatch Nuclear Plant, Unit 2, located in Appling County, Georgia.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action: The exemption allows the use of a minimum flow rate of 41.2 GPM and an available sodium pentaborate concentration ranging from 6.2 weight percent (w/o) to 13 w/o depending on the volume of the sodium pentaborate solution existing in the standby liquid control system (SLCS) storage tank. The flow rate and concentration of sodium pentaborate are different from the requirements of 10 CFR 50.62(c)(4) which specify a flow rate of 86 GPM and a concentration of 13 w/o of sodium pentaborate.

The exemption responds to the licensee's application for exemption dated January 6, 1988.

The Need for the Proposed Action: The exemption is needed because the licensee proposes to depart from 10 CFR 50.62(c)(4) requirements in view of Hatch, Unit 2, having a reactor vessel diameter which is smaller than that used to establish the minimum flow and boron content requirements set forth in the regulation.

The flow and concentration requirements in 10 CFR 50.62 were based upon achiev-

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ing a desired negative reactivity insertion rate into a 251-inch reactor vessel. However, the regulation does not explicitly refer to the vessel size.

The reactor vessel for Hatch, Unit 2 is 218 inches in diameter. Accordingly, the licensee has proposed to meet the requirements of 10 CFR 50.62(c)(4) by using sodium pentaborate enriched to 60 atomic percent in the Boron-10 isotope, in solution with a concentration ranging from 6.2 w/o to 13 w/o depending upon the solution volume, and with a minimum injection flow rate of 41.2 GPM. For the Hatch, Unit 2 reactor vessel size, this injection flow rate and solution concentration, using a minimum of 60 atomic percent Boron-10 in the sodium pentaborate, results in a negative reactivity insertion rate equivalent to that specified in 10 CFR 50.62(c)(4) for a 251-inch reactor vessel.

Environmental Impacts of the Proposed Action: The exemption provides a degree of protection for the Hatch Unit 2 reactor equivalent to that required by the regulation for reactors with larger reactor vessels for prompt injection of negative reactivity into a boiling water reactor pressure vessel in the event of an ATWS. Consequently, the probability of accidents has not been increased by the exemption and the post-accident radiological releases would not be greater than previously determined. The exemption does not otherwise affect radiological plant effluents. Therefore, the Commission concludes that there are no significant radiological environmental impacts associated with this exemption.

The exemption does not affect nonradiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the exemption.

Alternatives to the Proposed Action: Since the Commission has concluded that there are no significant environmental effects that would result from the action, any alternatives with equal or greater environmental impacts need not be evaluated.

The principal alternative would be to deny the requested exemption. This would not reduce the environmental impacts attributable to this facility and would result in a larger expenditure of licensee resources to comply with the Commission's regulations.

Alternative Use of Resources: This action involves no use of resources not previously considered in the Final Environmental Statement related to operation of the Hatch, Unit 2 Plant, dated March 1978.

Agencies and Persons Consulted: The Commission's staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

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

For further details with respect to this action, see the application for the exemption dated January 6, 1988 which is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Appling County Public Library, 301 City Hall Drive, Baxley, Georgia 31513.

Dated at Bethesda, Maryland, this 25<sup>th</sup> day of January 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

Lawrence P. Crocker, Acting Director  
Project Directorate II-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

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