

August 22, 2000

Mr. H. L. Sumner, Jr.  
Vice President - Nuclear  
Hatch Project  
Southern Nuclear Operating  
Company, Inc.  
Post Office Box 1295  
Birmingham, Alabama 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2 RE: ENVIRONMENTAL  
ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR AN  
EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50,  
SECTION 50.60 AND APPENDIX G (TAC NOS. MA9121 AND MA9122)

Dear Mr. Sumner:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for an exemption from the requirements of Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.60(a) for Edwin I. Hatch Nuclear Plant, Units 1 and 2. The application for exemption was contained in your submittal dated June 1, 2000, which requested use of the methodology contained in the American Society of Mechanical Engineers (ASME) Code Cases N-588 (for determining the reactor vessel pressure-temperature limits derived from postulating a circumferentially-oriented reference flaw in a circumferential weld), and N-640 (as an alternate reference fracture toughness for reactor vessel materials for use in determining the pressure-temperature limits).

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

Sincerely,

**/RA/**

Leonard N. Olshan, Senior Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosure: Environmental Assessment

cc w/encl: See next page

Mr. H. L. Sumner, Jr.  
 Vice President - Nuclear  
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SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2 RE: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR AN EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50, SECTION 50.60 AND APPENDIX G (TAC NOS. MA9121 AND MA9122)

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Leonard N. Olshan, Senior Project Manager, Section 1  
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 Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosure: As stated

cc w/encl: See next page

**Accession Number ML003743134 \*See Previous Concurrence**

OFFICE	PM:PDII/S1	LA:PDII/S1	RGE*	OGC	SC:PDII/S1(A)	D:PDII
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UNITED STATES NUCLEAR REGULATORY COMMISSION

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

DOCKET NOS. 50-321 AND 50-366

EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from certain requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.60(a) to the Southern Nuclear Operating Company, Inc. (the licensee) for operation of the Edwin I. Hatch Nuclear Plant, Units 1 and 2 located in Appling County, Georgia.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would exempt the licensee from certain provisions of 10 CFR Part 50, Section 50.60(a) and 10 CFR Part 50, Appendix G. The NRC has established requirements in 10 CFR Part 50 to protect the integrity of the reactor coolant pressure boundary (RCPB) in nuclear power plants. As part of these requirements, 10 CFR Part 50, Appendix G requires that pressure-temperature (P-T) limits be established for reactor pressure vessels (RPVs) during normal operating and hydrostatic pressure and leak rate test conditions. Specifically, 10 CFR Part 50, Appendix G states that “[t]he appropriate requirements...on pressure-temperature limits and minimum permissible temperature must be met for all conditions.” Appendix G of 10 CFR Part 50 specifies that the requirements for these limits are the American Society of Mechanical Engineers (ASME) Code, Section XI, Appendix G limits.

Pressurized water reactor licensees have installed cold overpressure mitigation

systems/low temperature overpressure protection (LTOP) systems in order to protect the RCPB from being operated outside of the boundaries established by the P-T limit curves and to provide pressure relief on the RCPB during low temperature overpressurization events. The licensee is required by the Hatch Technical Specifications (TS) to update and submit the changes to its LTOP setpoints whenever the licensee is requesting approval for amendments to the P-T limit curves in the Hatch TS.

Therefore, in order to address provisions of amendments to the TS P-T limits and LTOP curves, the licensee requested in its submittal dated June 1, 2000, that the staff exempt Hatch, Units 1 and 2 from application of specific requirements of 10 CFR Part 50, Section 50.60(a) and 10 CFR Part 50, Appendix G and substitute use of two ASME Code Cases as follows:

1. N-588 for determining the reactor vessel P-T limits derived from postulating a circumferentially-oriented reference flaw in a circumferential weld, and
2. N-640 as an alternate reference fracture toughness for reactor vessel materials for use in determining the P-T limits.

The proposed action is in accordance with the licensee's application for exemption contained a submittal dated June 1, 2000, and is needed to support the TS amendments that are contained in the same submittal and are being processed separately. The proposed amendments will revise the P-T limits of TS 3.4.9 for Hatch, Units 1 and 2 related to the heatup, cooldown, and inservice test limitations for the Reactor Coolant System of each unit to a maximum of 54 Effective Full Power Years (EFPY).

The Need for the Proposed Action:

ASME Code Case N-588 and Code Case N-640 are needed to revise the method used to determine the RCS P-T limits since continued use of the present curves unnecessarily restricts the P-T operating window. Application of the codes will, therefore, relax the LTOP operating window and reduce potential challenges to the reactor coolant system power operated relief valves.

In the associated exemption, the staff has determined that, pursuant to 10 CFR 50.12(a)(2)(ii), the underlying purpose of the regulation will continue to be served by the implementation of these Code Cases.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that the exemption described above would provide an adequate margin of safety against brittle failure of the Hatch, Units 1 and 2 reactor vessels.

The proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological environmental impacts, the proposed action does not involve any historic sites. It does not affect nonradiological plant effluents and has no other environmental impacts. Therefore, there are no significant nonradiological impacts associated with the proposed action.

Accordingly, the Commission concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Edwin I. Hatch Nuclear Plant, Units 1 and 2 dated October 1972.

Agencies and Persons Consulted:

In accordance with its stated policy, on August 11, 2000, the staff consulted with the Georgia State official, James Setser, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated June 1, 2000, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC. Publically available records will be accessible electronically from the ADAMS Public Library component on the NRC Web site, <http://www.nrc.gov> (the Electronic Reading Room).

Dated at Rockville, Maryland, this 22<sup>nd</sup> day of August 2000.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Richard L. Emch, Jr., Chief, Section 1  
Project Directorate II  
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Edwin I. Hatch Nuclear Plant

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