

April 5, 2002

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, UNIT 1 RE: ISSUANCE OF AMENDMENT  
(TAC NO. MB3756)

Dear Mr. Sumner:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 229 to Facility Operating License DPR-57 for the Edwin I. Hatch Nuclear Plant, Unit 1. The amendment consists of changes to the Technical Specifications in response to your application dated January 4, 2002, as supplemented by letter dated March 15, 2002.

The amendment revises the Safety Limit Minimum Critical Power Ratio for single loop operation to reflect the results of a cycle-specific calculation for Unit 1 Operating Cycle 21.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

***/Original signed by:/***

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

Enclosures:

1. Amendment No. 229 to DPR-57
2. Safety Evaluation

cc w/encls: See next page

April 5, 2002

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, UNIT 1 RE: ISSUANCE OF AMENDMENT  
(TAC NO. MB3756)

Dear Mr. Sumner:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 229 to Facility Operating License DPR-57 for the Edwin I. Hatch Nuclear Plant, Unit 1. The amendment consists of changes to the Technical Specifications in response to your application dated January 4, 2002, as supplemented by letter dated March 15, 2002.

The amendment revises the Safety Limit Minimum Critical Power Ratio for single loop operation to reflect the results of a cycle-specific calculation for Unit 1 Operating Cycle 21.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

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

Enclosures:

1. Amendment No. 229 to DPR-57
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC	CHawes	SCahill, RII
PDII-1 R/F	OGC	
HBerkow	ACRS	
RLaufer	GHill (4)	
LOlshan	WBeckner	

**Package: ML021050042**

\*No major changes to SE

Accession Number: **ML020850715**

**TS: ML021020430**

\*\*See previous concurrence

OFFICE	PDII-1/PM	PDII-1/LA	OGC**	PDII-1/(A)SC	DSSA/SRXB*
NAME	LOlshan	CHawes	JHeck	RLaufer	RCaruso
DATE	4/5/02	4/5/02	4/1/02	4/5/02	3/19/02

OFFICIAL RECORD COPY

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-321

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 229  
License No. DPR-57

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-57 filed by Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated January 4, 2002, as supplemented by letter dated March 15, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-57 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 229 , are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Richard J. Laufer, Acting Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: April 5, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 229

FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

Insert

2.0-1

2.0-1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 229 TO FACILITY OPERATING LICENSE DPR-57

SOUTHERN NUCLEAR OPERATING COMPANY, INC., ET AL.

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-321

## 1.0 INTRODUCTION

By letter dated January 4, 2002, as supplemented by letter dated March 15, 2002, Southern Nuclear Operating Company, Inc. (Southern Nuclear, the licensee), et al., proposed license amendment to change the Technical Specifications (TS) for the Edwin I. Hatch Nuclear Plant, Unit 1. The proposed changes would revise the Safety Limit Minimum Critical Power Ratio (SLMCPR) for single loop operation (SLO) to reflect the results of a cycle-specific calculation performed for Cycle 21. The supplemental letter dated March 15, 2002, provided clarifying information that did not change the scope of the January 4, 2002, application nor the initial proposed no significant hazards consideration determination.

## 2.0 EVALUATION

The licensee proposed to change the SLMCPR value in TS 2.1.1.2 for Hatch, Unit 1, Cycle 21 operation from 1.08 to 1.09 for SLO with the reactor vessel steam dome pressure greater than or equal to 785 psig and core flow greater than or equal to 10 percent of rated core flow. No change is needed for two-loop operation.

The licensee described the approved methodologies used to calculate the SLMCPR value for the proposed TS change. The Cycle 21 SLMCPR analysis was performed by Global Nuclear Fuel (GNF) using plant- and cycle-specific fuel and core parameters, and NRC-approved methodologies including NEDC-32505P, Revision 1 (R-Factor Calculation Method for GE11, GE12 and GE13 Fuel), NEEDO-10958-A (GETAB), NEDC-32601P (Methodology and Uncertainties for Safety Limit M CPR Evaluations), NEDC-32694P (Power Distribution Uncertainties for Safety Limit M CPR Evaluation), and Amendment 25 to NEDE-24011-P-A (GESTAR II).

The staff has reviewed: (1) the justification for the change on the SLMCPR from 1.08 to 1.09 for SLO using the approach stated in Amendment 25 to GESTAR II; (2) the issue related to the staff's March 2001 audit on GNF data bases for GEXL14 correlation; and (3) the applicability of the previous approved methodologies to GE14 fuel.

The NRC staff identified discrepancies in data bases while conducting an audit on GNF's GEXL correlation development for the Duane Arnold plant-specific power uprate application in

March 2001. The details of the deficiencies are described in a letter to the Duane Arnold licensee dated June 4, 2001. Based on the findings of that audit, the NRC staff requested that the Hatch licensee provide a justification why the overall GEXL14 correlation uncertainty remains valid. In its response to the NRC staff's request for additional information dated March 15, 2002, the licensee provided the results of additional analyses that indicated there is sufficient conservatism for Hatch, Unit 1 Cycle 21 SLMCPR values since no top-peaked power shape is expected during Hatch, Unit 1 Cycle 21 operation. The NRC staff reviewed the licensee's evaluation and found it to be acceptable since NRC-approved methodologies were used.

To address the audit issue about the applicability of the previously approved methodologies to GE14 fuel, GNF submitted two letters for the staff's review: (1) FLN-2001-016, from Glen A. Watford to USNRC, "Confirmation of 10x10 Fuel Design Applicability to Improved SLMCPR, Power Distribution and R-Factor Methodologies," dated September 24, 2001, and (2) FLN-2001-017, from Glen A. Watford to USNRC, "Confirmation of Applicability of GEXL14 Correlation and Associated R-Factor Methodology for Calculating SLMCPR Values in Core Containing GE14 Fuel," dated October 1, 2001. The NRC staff reviewed the GNF evaluation contained in the two letters and found the approach, supplemented by the approach dealing with a proposed higher interim GEXL14 correlation uncertainty discussed in the licensee's RAI response, dated March 15, 2002, is acceptable for this application because NRC-approved methodologies were used and GNF committed to perform additional tests.

Based on the results of the review of the January 4 and March 15, 2002, submittals, the staff found that the SLMCPR analysis for Hatch, Unit 1 Cycle 21 operation using the plant- and cycle-specific parameters in conjunction with the approved method is acceptable. The proposed Cycle 21 SLMCPR values will ensure that 99.9 percent of the fuel rods in the core will not experience boiling transition, which satisfies the requirements of General Design Criterion 10 of Appendix A to 10 CFR Part 50 regarding acceptable fuel design limits. The staff has also concluded that the justification for analyzing and determining the SLMCPR value of 1.09 for SLO operation and no change of 1.07 value for two recirculation loop operation is acceptable for Hatch, Unit 1 Cycle 21 since approved methodologies are used. Also, the analysis shows that a top-peaked power shape related to the issue of the data bases for GEXL 14 correlation is not applicable to, and does not have any impact on, Hatch, Unit 1 Cycle 21 operation.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (67 FR 5333). Accordingly, the amendment meets the eligibility criteria for categorical

exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

## 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: T. Huang

Date: April 5, 2002

Edwin I. Hatch Nuclear Plant

cc:

Mr. Ernest L. Blake, Jr.  
Shaw, Pittman, Potts  
and Trowbridge  
2300 N Street, NW.  
Washington, DC 20037

Mr. D. M. Crowe  
Manager, Licensing  
Southern Nuclear Operating  
Company, Inc.  
P. O. Box 1295  
Birmingham, Alabama 35201-1295

Resident Inspector  
Plant Hatch  
11030 Hatch Parkway N.  
Baxley, Georgia 31531

Mr. Charles H. Badger  
Office of Planning and Budget  
Room 610  
270 Washington Street, SW.  
Atlanta, Georgia 30334

Harold Reheis, Director  
Department of Natural Resources  
205 Butler Street, SE., Suite 1252  
Atlanta, Georgia 30334

Steven M. Jackson  
Senior Engineer - Power Supply  
Municipal Electric Authority  
of Georgia  
1470 Riveredge Parkway, NW  
Atlanta, Georgia 30328-4684

Charles A. Patrizia, Esquire  
Paul, Hastings, Janofsky & Walker  
10th Floor  
1299 Pennsylvania Avenue  
Washington, DC 20004-9500

Chairman  
Appling County Commissioners  
County Courthouse  
Baxley, Georgia 31513

Mr. J. D. Woodard  
Executive Vice President  
Southern Nuclear Operating  
Company, Inc.  
P. O. Box 1295  
Birmingham, Alabama 35201-1295

Mr. P. W. Wells  
General Manager, Edwin I. Hatch  
Nuclear Plant  
Southern Nuclear Operating  
Company, Inc.  
U.S. Highway 1 North  
P. O. Box 2010  
Baxley, Georgia 31515

Mr. L. M. Bergen  
Resident Manager  
Oglethorpe Power Corporation  
Edwin I. Hatch Nuclear Plant  
P. O. Box 2010  
Baxley, Georgia 31515