

October 1, 2008

Mr. Dennis R. Madison
Vice President - Hatch
Edwin I. Hatch Nuclear Plant
11028 Hatch Parkway North
Baxley, GA 31513

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2, ISSUANCE
OF AMENDMENTS REGARDING IMPROVED CONTROL ROD INSERTION
PROCESS, TSTF 476, REVISION 1, (TAC NOS. MD6922 AND MD6923)

Dear Mr. Madison:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 258 to Renewed Facility Operating License DPR-57 and Amendment No. 202 to Renewed Facility Operating License NPF-5 for the Edwin I. Hatch Nuclear Plant, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated October 3, 2007.

The amendments revise a footnote in TS Table 3.3.2.1-1, "Control Rod Block Instrumentation," such that a new banked position withdrawal sequence could be utilized. Associated changes are made to the TS Bases by the licensee. This operating license improvement was made available by the NRC staff on May 23, 2007, as part of the consolidated line item improvement process.

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

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosures:

1. Amendment No. 258 to DPR-57
2. Amendment No. 202 to NPF-5
3. Safety Evaluation

cc w/encls: See next page

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A. Jason Lising, NRR

Amendment No. ML073230116

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	DIRS/ITSB/BC	OGC	NRR/LPL2-1/BC
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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 NO.1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 258
Renewed License No. DPR-57

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 1 (the facility) Renewed 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 October 3, 2007, 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 Renewed 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. 258, are hereby incorporated in the license. The licensee 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by LOIshan for/

Melanie C. Wong, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. DPR-57
and the Technical Specifications

Date of Issuance: October 1, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 258

RENEWED FACILITY OPERATING LICENSE NO. DPR-57

DOCKET NO. 50-321

Replace the following pages of the License and the Appendix A Technical Specifications (TSs) with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

License

Page 4

TSs

3.3-19
B 3.1-31
B 3.1-32
B 3.1-33
B 3.1-34
B 3.3-44
B 3.3-45
B 3.3-46
B 3.3-47
B 3.3-48
B 3.3-49
B 3.3-50
B 3.3-51
B 3.3-52

Insert Pages

License

Page 4

TSs

3.3-19
B 3.1-31
B 3.1-32
B 3.1-33
B 3.1-34
B 3.3-44
B 3.3-45
B 3.3-46
B 3.3-47
B 3.3-48
B 3.3-49
B 3.3-50
B 3.3-51
B 3.3-52

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-366

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 202
Renewed License No. NPF-5

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit 2 (the facility) Renewed Facility Operating License No. NPF-5 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 October 3, 2007, 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 Renewed Facility Operating License No. NPF-5 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. 202 are hereby incorporated in the license. The licensee 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by LOIshan for/

Melanie C. Wong, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. NPF-5
and the Technical Specifications

Date of Issuance: October 1, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 202
RENEWED FACILITY OPERATING LICENSE NO. NPF-5
DOCKET NO. 50-366

Replace the following pages of the License and the Appendix A Technical Specifications (TSs) with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

License
Page 4

TSs

3.3-19
B 3.1-31
B 3.1-32
B 3.1-33
B 3.1-34
B 3.3-44
B 3.3-45
B 3.3-46
B 3.3-47
B 3.3-48
B 3.3-49
B 3.3-50
B 3.3-51
B 3.3-52

Insert Pages

License
Page 4

TSs

3.3-19
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B 3.1-32
B 3.1-33
B 3.1-34
B 3.3-44
B 3.3-45
B 3.3-46
B 3.3-47
B 3.3-48
B 3.3-49
B 3.3-50
B 3.3-51
B 3.3-52

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO
AMENDMENT NO. 258 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-57
AND
AMENDMENT NO. 202 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-5
SOUTHERN NUCLEAR OPERATING COMPANY, INC.
EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-321 AND 50-366

1.0 INTRODUCTION

By application dated October 3, 2007 (Agencywide Documents and Management System (ADAMS) Accession No. ML072820527), Southern Nuclear Operating Company, Inc. (SNC, the licensee), requested changes to the Technical Specifications (TSs) for the Edwin I. Hatch Nuclear Plant, Unit Nos. 1 and 2 (HNP).

The proposed changes would revise the TSs to adopt changes made to the Boiling Water Reactor (BWR) Standard Technical Specifications (STS) by the Technical Specifications Task Force (TSTF) proposal in TSTF-476, Revision 1, "Improved BPWS Control Rod Insertion Process (NEDO-33091)," as submitted by letter dated January 9, 2007, (ADAMS Accession No. ML070090561). This TSTF involves changes to the Bases for NUREG-1433, Section 3.1.6, "Rod Pattern Control," and Section 3.3.2.1, "Control Rod Block Instrumentation," and it also involves changes to TS Table 3.3.2.1-1 for those plants that cannot reprogram the rod worth minimizer (RWM). The TSTF is based on an NRC approved Licensing Topical Report (LTR), "NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process,"" (NEDO-33091-A), that was submitted by letter to the NRC dated August 5, 2004, (ADAMS Accession No. ML042230366). The changes to the HNP TS will allow the use of the improved banked position withdrawal sequence (BPWS) during shutdowns if the conditions in NEDO-33091-A, Revision 2, "Improved BPWS Control Rod Insertion Process," dated July 2004, have been satisfied.

2.0 REGULATORY EVALUATION

The control rod drop accident (CRDA) is the design basis accident for the subject TS changes. In order to minimize the impact of a CRDA, the BPWS process was developed to minimize control rod reactivity worth for BWR plants. The proposed improved BPWS further simplifies the control rod insertion process, and in order to evaluate it, the staff followed the guidelines of Standard Review Plan Section 15.4.9, and referred to General Design Criterion (GDC) 28 of Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, as its regulatory requirement. GDC 28 states that "the reactivity control systems shall be designed with appropriate limits on the

potential amount and rate of reactivity increase to assure that the effects of postulated reactivity accidents can neither (1) result in damage to the reactor coolant pressure boundary greater than limited local yielding nor (2) sufficiently disturb the core, its support structures or other reactor pressure vessel internals to impair significantly the capability to cool the core.”

3.0 TECHNICAL EVALUATION

In its safety evaluation for Licensing Topical Report NEDO-33091-A, dated June 16, 2004, (ADAMS Accession No. ML041700479), the NRC staff determined that the methodology described in TSTF-476, Revision 1, to incorporate the improved BPWS into the STS, is acceptable.

TSTF-476, Revision 1, states that the improved BPWS provides the following benefits: (1) allows the plant to reach the all-rods-in condition prior to significant reactor cool down, which reduces the potential for re-criticality as the reactor cools down; (2) reduces the potential for an operator reactivity control error by reducing the total number of control rod manipulations; (3) minimizes the need for manual scrams during plant shutdowns, resulting in less wear on control rod drive (CRD) system components and CRD mechanisms; and, (4) eliminates unnecessary control rod manipulations at low power, resulting in less wear on reactor manual control and CRD system components.

The HNP has been approved to use the improved BPWS, and the potential for a CRDA with power below the low power setpoint (LPSP) has been eliminated. The safety evaluation for NEDO-33091-A explained that the potential for the CRDA will be eliminated by the following changes to operational procedures, which HNP has committed to make, as stated in its application, prior to implementation:

1. Before reducing power to the LPSP, operators shall confirm control rod coupling integrity for all rods that are fully withdrawn. Control rods that have not been confirmed coupled and are in intermediate positions must be fully inserted prior to power reduction to the LPSP. No action is required for fully-inserted control rods. If a shutdown is required and all rods, which are not confirmed coupled, cannot be fully inserted prior to power dropping below the LPSP, then the original/standard BPWS must be adhered to.
2. After reactor power drops below the LPSP, rods may be inserted from notch position 48 to notch position 00 without stopping at the intermediate positions. However, GE Nuclear Energy recommends that operators insert rods in the same order as specified for the original/standard BPWS as much as reasonably possible. If a plant is in the process of shutting down following improved BPWS with the power below the LPSP, no control rod shall be withdrawn unless the control rod pattern is in compliance with standard BPWS requirements.

In addition to the procedure changes specified above, the NRC staff previously verified during its review of NEDO-33091-A, Revision 2, that no single failure of the BWR control rod drive (CRD) mechanical or hydraulic system can cause a control rod to drop completely out of the reactor core during the shutdown process. Therefore, the proper use of the improved BPWS will prevent a CRDA from occurring while power is below the LPSP.

The NRC staff finds that the proposed TS changes in the HNP license amendment request properly incorporate the improved BPWS procedure into the TS, and that the licensee accurately adopted TSTF-476 and the requisite procedural changes. Therefore, the NRC staff approves the HNP license amendment request to adopt TSTF-476, Revision 1.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change 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 amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (November 6, 2007, 72 FR 62691). Accordingly, the amendments meet 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 amendments.

6.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: A. Jason Lising

Date: October 1, 2008

Edwin I. Hatch Nuclear Plant, Units 1 & 2

cc:

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