

March 10, 2003

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: ISSUANCE OF
AMENDMENTS (TAC NOS. MB6106 AND MB6107)

Dear Mr. Sumner:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 237 to Renewed Facility Operating License DPR-57 and Amendment No. 179 to Renewed Facility Operating License NPF-5 for the Edwin I. Hatch Nuclear Plant, Units 1 and 2. The amendments consist of changes to the two Renewed Facility Operating Licenses in response to your application dated August 9, 2002, as supplemented by letters dated January 8 and February 6, 2003.

The amendments revise the Updated Final Safety Analysis Report to incorporate the Boiling Water Reactor Vessel and Internals Project Integrated Surveillance Program for the surveillance of the material capsules.

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, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosures:

1. Amendment No. 237 to DPR-57
2. Amendment No. 179 to NPF-5
3. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION:

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cc w/encls: See next page

**See previous concurrence

*No major changes to SE

ADAMS Accession No.: ML030690457

OFFICE	PDII-1/PM	PDII-1/LA	EMCB*	OGC**	PDII-1/SC
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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 RENEWED FACILITY OPERATING LICENSE

Amendment No. 237

Renewed 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) 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 August 9, 2002, as supplemented by letters dated January 8 and February 6, 2003, 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 to authorize revision to the Updated Final Safety Analysis Report as set forth in the application for amendment by the licensee dated August 9, 2002, as supplemented by letters dated January 8 and February 6, 2003.
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/

John A. Nakoski, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2003

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 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 179
Renewed License No. NPF-5

1. The 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 August 9, 2002, as supplemented by letters dated January 8 and February 6, 2003, 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 to authorize revision to the Updated Final Safety Analysis Report as set forth in the application for amendment by the licensee dated August 9, 2002, as supplemented by letters dated January 8 and February 6, 2003.
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/

John A. Nakoski, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: March 10, 2003

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO
AMENDMENT NO. 237 TO RENEWED FACILITY OPERATING LICENSE DPR-57
AND AMENDMENT NO. 179 TO RENEWED FACILITY OPERATING LICENSE NPF-5
SOUTHERN NUCLEAR OPERATING COMPANY, INC., ET AL.
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-321 AND 50-366

1.0 INTRODUCTION

By letter dated August 9, 2002 (Reference (Ref.) 1), as supplemented by letters dated January 8, 2003 (Ref. 2), and February 6, 2003 (Ref. 3), Southern Nuclear Operating Company, Inc. (SNC, the licensee), et al., proposed license amendments to revise the Updated Final Safety Analysis Report (UFSAR) for the Edwin I. Hatch Nuclear Plant (Hatch), Units 1 and 2. The proposed changes would revise the UFSAR to incorporate the Boiling Water Reactor (BWR) Vessel and Internals (BWRVIP) Integrated Surveillance Program (ISP) for the surveillance of the material capsules. The supplemental letters dated January 8 and February 6, 2003, provided clarifying information that did not change the scope of the August 9, 2002, application nor the initial proposed no significant hazards consideration determination.

The BWRVIP ISP was submitted for NRC staff review and approval in topical reports BWRVIP-78, "BWR Vessel and Internals Project, BWR Integrated Surveillance Program Plan," (Ref. 4) and BWRVIP-86, "BWR Vessel and Internals Project, BWR Integrated Surveillance Program Implementation Plan" (Ref. 5). Additional information necessary to establish the technical basis for, and proposed implementation of, the BWRVIP ISP was provided in letters from the BWRVIP to the NRC dated December 22, 2000 (Ref. 6), and May 30, 2001 (Ref. 7). The NRC staff approved the proposed BWRVIP ISP in a Safety Evaluation (SE) that was provided to the BWRVIP by letter dated February 1, 2002 (Ref. 8). However, the NRC staff's SE required that plant-specific information be provided by BWR licensees that wish to implement the BWRVIP ISP for their facilities. SNC's August 9, 2002, January 8 and February 6, 2003, submittals addressed the plant-specific information required in the NRC staff's February 1, 2002, BWRVIP ISP SE.

Enclosure

2.0 REGULATORY EVALUATION

Nuclear power plant licensees are required by Appendix H to Part 50 to Title 10 of the *Code of Federal Regulations* (10 CFR Part 50) to implement reactor pressure vessel (RPV) surveillance programs to “monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region...which result from exposure of these materials to neutron irradiation and the thermal environment.” Two specific alternatives are provided with regard to the design of a facility’s RPV surveillance program which may be used to address the requirements of Appendix H to 10 CFR Part 50.

The first alternative is the implementation of a plant-specific RPV surveillance program consistent with the requirements of American Society for Testing and Materials (ASTM) Standard Practice E 185, “Standard Practice for Conduction Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels.” In the design of a plant-specific RPV surveillance program, a licensee may use the edition of ASTM Standard Practice E 185 that was current on the issue date of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code to which the reactor vessel was purchased, or later editions through the 1982 edition.

The second alternative provided in Appendix H to 10 CFR Part 50 is the implementation of an ISP. An ISP is defined in Appendix H to 10 CFR Part 50 as occurring when, “the representative materials chosen for surveillance for a reactor are irradiated in one or more other reactors that have similar design and operating features.” Five specific criteria are stated in Appendix H to 10 CFR Part 50 that must be met to support approval of an ISP:

- a. The reactor in which the materials will be irradiated and the reactor for which the materials are being irradiated must have sufficiently similar design and operating features to permit accurate comparisons of the predicted amount of radiation damage.
- b. Each reactor must have an adequate dosimetry program.
- c. There must be adequate arrangement for data sharing between plants.
- d. There must be a contingency plan to assure that the surveillance program for each reactor will not be jeopardized by operation at reduced power level or by an extended outage of another reactor from which data are expected.
- e. There must be substantial advantages to be gained, such as reduced power outages or reduced personnel exposure to radiation, as a direct result of not requiring surveillance capsules in all reactors in the set.

As noted above, the NRC staff approved the proposed BWRVIP ISP in an SE that was issued to the BWRVIP by letter dated February 1, 2002 (Ref. 8). In that letter, all of the criteria cited above for approval of an ISP were addressed either completely or partially. For those criteria that could not be fully addressed in that letter, plant-specific information was required from licensees that wished to implement the BWRVIP for their facilities. As stated in Ref. 7:

[L]icensees who wish to participate in the BWR ISP must provide, for NRC staff review and approval, information which defines how they will determine RPV and/or surveillance capsule fluences based on the dosimetry data which will be available for

their facilities. This information must be submitted concurrently with each licensee's submittal to replace their existing plant-specific surveillance program with the BWR ISP as part of their facility's licensing basis. The information submitted must be sufficient for the staff to determine that:

(1) RPV and surveillance capsule fluences will be established...based on the use of an NRC-approved fluence methodology that will provide acceptable results based on the available dosimetry data,

(2) if one methodology is used to determine the neutron fluence values for a licensee's RPV and one or more different methodologies are used to establish the neutron fluence values for the ISP surveillance capsules which "represent" that RPV in the ISP, the results of these differing methodologies are compatible (i.e., within acceptable levels of uncertainty for each calculation).

This plant-specific information was required by the NRC staff to ensure that, for an ISP, Criterion b from Appendix H to 10 CFR Part 50 could be met by each facility and to confirm that data that would be shared as part of the BWRVIP ISP could be effectively utilized by each licensee for the monitoring of RPV embrittlement for its facility.

3.0 TECHNICAL EVALUATION

In Ref. 1, 2, and 3 SNC submitted information for Hatch, Units 1 and 2, that addressed the information requested in the NRC staff's February 1, 2002 BWRVIP ISP SE (Ref. 8). SNC provided a commitment in Ref. 2 with regard to the use of a neutron fluence methodology that is consistent with the guidance in Regulatory Guide (RG) 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence," for future Hatch, Units 1 and 2 RPV fluence calculations. In response to a conference call on January 24, 2003, the licensee supplemented its application (Ref. 3) to document its commitment to update the UFSAR to note that the neutron fluence methodology used at Hatch, Units 1 and 2, will comply with RG 1.190.

The NRC staff has concluded that the inclusion of a commitment to utilize a fluence methodology that is consistent with the guidance in RG 1.190 in the Hatch, Units 1 and 2, UFSARs is sufficient to address both items (1) and (2) from Ref. 8. Regarding item (1), the licensee's use of a methodology that is consistent with the attributes of RG 1.190 for determining Hatch, Units 1 and 2, RPV neutron fluence values and that has been approved by the NRC staff, will provide acceptable results based upon the available dosimetry data. Regarding item (2), RPV surveillance capsules tested under the BWRVIP ISP will have their fluences determined by the use of a methodology that is consistent with the attributes of RG 1.190 and has been approved by the NRC staff. The NRC staff has concluded that any two (or more) different fluence methodologies will provide "compatible" (as defined in Ref. 8) results provided that each methodology is consistent with the attributes of RG 1.190 and has been approved by the NRC staff. In addition, SNC provided an additional commitment in its January 8, 2003, submittal stating when SNC will perform and updated RPV fluence analysis for the Hatch, Units 1 and 2 RPVs:

SNC will begin using an RPV fluence methodology that meets RG 1.190 no later than December 15, 2004.

The NRC staff found this commitment by SNC to be acceptable since the current RPV fluence

calculations (and RPV pressure-temperature limit curves that are valid up to 54 effective full power years of operation) for the Hatch, Units 1 and 2 RPVs are expected to remain conservative with respect to the actual, accumulated RPV neutron fluence through December 15, 2004.

Since this action was submitted as a license amendment, consistent with the NRC staff's understanding of the decision given in Commission Memorandum and Order CLI-96-13, SNC provided revised sections of the Hatch, Units 1 and 2, UFSARs that documented the licensee's incorporation of the BWRVIP ISP into the Hatch, Units 1 and 2, licensing bases:

Hatch, Unit 1

A matrix of capsules containing the representative weld and plate materials and the planned schedules for withdrawing and testing is provided in Table R.6-3. The overall ISP, as documented in references 1 through 5, replaces the existing material and surveillance monitoring programs with an integrated program using host reactor capsules containing the selected materials.

Hatch, Unit 2

A matrix of capsules containing the representative weld and plate materials and the planned schedules for withdrawing and testing is provided in Table 5.2-11. The overall ISP, as documented in references 28 through 32, replaces the existing material and surveillance monitoring programs with an integrated program using host reactor capsules containing the selected materials.

In either case, the references referred to in the statements above from the Hatch, Unit 1 and 2, UFSARs are consistent with Ref. 4 through 8 of this SE.

The NRC staff has concluded that the information provided in the revised Hatch, Units 1 and 2, UFSARs is adequate to document the licensee's intent to appropriately implement the BWRVIP ISP as the method for demonstrating the compliance of Hatch, Units 1 and 2, with the requirements of Appendix H to 10 CFR Part 50.

The NRC staff has concluded that the information provided by SNC was sufficient to conclude that the BWRVIP ISP, as approved in Ref. 8, can be implemented for Hatch, Units 1 and 2, as the basis for demonstrating the facility's continued compliance with the requirements of Appendix H to 10 CFR Part 50. As part of the implementation and documentation of the licensee's intent to utilize the BWRVIP ISP for this purpose, the licensee shall modify the Hatch, Units 1 and 2 FSARs, as noted above, as stated in the licensee's January 8 and February 6, 2003, submittals.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendments. 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 and change a surveillance requirement. 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 (67 FR 61684). 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.

7.0 REFERENCES

1. H. L. Sumner, Jr. (SNC) to U.S. NRC Document Control Desk, "Edwin I. Hatch Nuclear Plant, Request to Implement the Boiling Water Reactor Vessel and Internals Project (BWRVIP) Integrated Surveillance Program," August 9, 2002.
2. H. L. Sumner, Jr. (SNC) to U.S. NRC Document Control Desk, "Edwin I. Hatch Nuclear Plant, Addendum to Request to Implement the Boiling Water Reactor Vessel and Internals Project (BWRVIP) Integrated Surveillance Program," January 8, 2003.
3. H. L. Sumner, Jr. (SNC) to U.S. NRC Document Control Desk, "Edwin I. Hatch Nuclear Plant, Second Addendum to Request to Implement the Boiling Water Reactor Vessel and Internals Program (BWRVIP) Integrated Surveillance Program," February 6, 2003.
4. C. Terry (BWRVIP) to U.S. NRC Document Control Desk, "Project No. 704 - BWR Vessel and Internals Project, BWR Integrated Surveillance Program Plan (BWRVIP-78)," December 22, 1999.
5. C. Terry (BWRVIP) to U.S. NRC Document Control Desk, "Project No. 704 - BWRVIP-86: BWR Vessel and Internals Project, BWR Integrated Surveillance Program Implementation Plan," EPRI Technical Report 1000888, December 22, 2000.
6. C. Terry (BWRVIP) to U.S. NRC Document Control Desk, "PROJECT NO. 704 - BWRVIP Response to NRC Request for Additional Information Regarding BWRVIP-78," December 15, 2000.
7. C. Terry (BWRVIP) to U.S. NRC Document Control Desk, "PROJECT NO. 704 - BWRVIP Response to Second NRC Request for Additional Information on the BWR Integrated Surveillance Program," May 30, 2001.

8. W. H. Bateman (USNRC) to C. Terry, "Safety Evaluation Regarding EPRI Proprietary Reports "BWR Vessel and Internals Project, BWR Integrated Surveillance Program Plan (BWRVIP-78)" and "BWRVIP-86: BWR Vessel and Internals Project, BWR Integrated Surveillance Program Implementation Plan," February 1, 2002.

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Date: March 10, 2003

Edwin I. Hatch Nuclear Plant

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