



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 9, 2011

Mr. M. J. Ajluni
Nuclear Licensing Director
Southern Nuclear Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295, Bin - 038
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2, ISSUANCE OF
AMENDMENTS REGARDING RESIDUAL HEAT REMOVAL (RHR) LOOP
OPERABILITY FOR TESTING (TAC NOS. ME5853 AND ME5854)

Dear Mr. Ajluni:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 163 to Renewed Facility Operating License NPF-68 and Amendment No. 145 to Renewed Facility Operating License NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2, respectively. The amendments consist of changes to the License and Technical Specifications (TSs) in response to your application dated March 14, 2011.

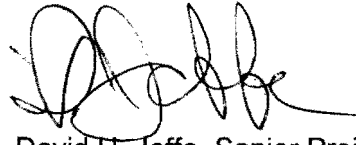
The amendments revise TS 3.9.6, "RHR and Coolant Circulation-Low Water Level," to allow one RHR loop to be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is operable and in operation. This revision is consistent with the Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Traveler TSTF-361-A, Revision 2, "Allow standby SDC [shutdown cooling]/RHR[residual heat removal]/DHR [decay heat removal] loop to inoperable to support testing."

M. Ajluni

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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,

A handwritten signature in black ink, appearing to read 'D. Jaffe', written over a horizontal line.

David H. Jaffe, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosures:

1. Amendment No. 163 to NPF-68
2. Amendment No. 145 to NPF-81
3. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-424

VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 163
Renewed License No. NPF-68

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 1 (the facility) Renewed Facility Operating License No. NPF-68 filed by the 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 March 14, 2011, 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.

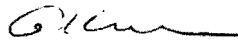
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-68 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 163 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Gloria Kulesa, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to License No. NPF-68
and the Technical Specifications

Date of Issuance: November 9, 2011



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-425

VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 145
Renewed License No. NPF-81

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 2 (the facility) Renewed Facility Operating License No. NPF-81 filed by the 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 March 14, 2011, 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-81 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 145 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Gloria Kulesa, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to License No. NPF-81
and the Technical Specifications

Date of Issuance: November 9, 2011

ATTACHMENT

TO LICENSE AMENDMENT NO. 163

RENEWED FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

AND

TO LICENSE AMENDMENT NO. 145

RENEWED FACILITY OPERATING LICENSE NO. NPF-81

DOCKET NO. 50-425

Replace the following pages of the Licenses 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

License No. NPF-68, page 4

License No. NPF-81, page 3

TSs

3.9.6-1

Insert Pages

License

License No. NPF-68, page 4

License No. NPF-81, page 3

TSs

3.9.6-1

(1) Maximum Power Level

Southern Nuclear is authorized to operate the facility at reactor core power levels not in excess of 3625.6 megawatts thermal (100 percent power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 163 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Southern Nuclear Operating Company shall be capable of establishing containment hydrogen monitoring within 90 minutes of initiating safety injection following a loss of coolant accident.

(4) Deleted

(5) Deleted

(6) Deleted

(7) Deleted

(8) Deleted

(9) Deleted

(10) Mitigation Strategy License Condition

The licensee shall develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy

- (2) Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, pursuant to the Act and 10 CFR Part 50, to possess but not operate the facility at the designated location in Burke County, Georgia, in accordance with the procedures and limitations set forth in this license;
 - (3) Southern Nuclear, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
 - (4) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (5) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
 - (6) Southern Nuclear, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified or incorporated below.

(1) Maximum Power Level

Southern Nuclear is authorized to operate the facility at reactor core power levels not in excess of 3625.6 megawatts thermal (100 percent power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 145, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

The Surveillance Requirements (SRs) contained in the Appendix A Technical Specifications and listed below are not required to be performed immediately upon implementation of Amendment No. 74. The SRs listed below shall be

3.9 REFUELING OPERATIONS

3.9.6 Residual Heat Removal (RHR) and Coolant Circulation – Low Water Level

LCO 3.9.6 Two RHR loops shall be OPERABLE, and one RHR loop shall be in operation.

-----NOTE-----

One RHR loop may be inoperable for ≤ 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.

APPLICABILITY: MODE 6 with the water level < 23 ft above the top of reactor vessel flange.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|-----------------|
| A. Less than the required number of RHR loops OPERABLE. | A.1 Initiate action to restore required RHR loops to OPERABLE status. | Immediately |
| | <u>OR</u> | |
| | A.2 Initiate action to establish ≥ 23 ft of water above the top of reactor vessel flange. | Immediately |
| B. No RHR loop in operation. | B.1 Suspend operations involving a reduction in reactor coolant boron concentration. | Immediately |
| | <u>AND</u> | |
| | | (continued) |



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 163 TO RENEWED FACILITY OPERATING LICENSE NPF-68

AND

AMENDMENT NO. 145 TO RENEWED FACILITY OPERATING LICENSE NPF-81

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-424 AND 50-425

1.0 INTRODUCTION

By application dated March 14, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110740324), Southern Nuclear Operating Company, Inc. (SNC, the licensee), requested changes to the Technical Specifications (TSs) for the Vogtle Electric Generating Plant, Units 1 and 2 (VEGP). The proposed no significant hazards consideration determination was published in the *Federal Register* on May 17, 2011 (76 FR 28476).

The changes revise TS 3.9.6, "RHR [residual heat removal] and Coolant Circulation-Low Water Level," to allow one RHR loop to be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is operable and in operation.

TS Section 3.9.6 currently requires that two RHR loops be operable and one be in operation whenever the water level is lower than 23 feet above the top of the reactor vessel flange. The new note would allow one RHR loop to be inoperable for less than 2 hours for surveillance testing provided that the other RHR loop is operable and in operation.

The change adds a note to TS limiting condition for operation (LCO) 3.9.6 that states "One RHR loop may be inoperable for \leq 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation."

In addition, the licensee will revise the Section 3.9.6 Bases to incorporate the changes associated with TS Task Force (TSTF)-361-A, Revision 2 to describe the operational configurations that must be considered prior to entering the condition.

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act requires that TSs be included in nuclear power plant operating licenses. In Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.36, the Nuclear Regulatory Commission (the NRC, or Commission) established its regulatory requirements related to the content of the TSs. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. On February 6, 1987, the Commission issued an "Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors," setting forth criteria for use in determining the content of TSs. During the period 1989 to 1992, utility groups and the NRC staff developed improved Standard Technical Specifications (STSs). On July 22, 1993, the Commission issued its Final Policy Statement, which described the safety benefits of the improved STSs, and encouraged licensees to use the improved STSs as a basis for plant-specific license amendments, and for complete conversions to plant-specific improved TSs.

The industry and the NRC staff have worked to refine the improved STSs, and many generic changes have been developed. These approved generic changes have improved the adoption process for the STS plants for which the changes apply. Generic changes to the STS NUREGs are proposed to the NRC by the Nuclear Energy Institute TSTF. After NRC approval, these TSTF changes, such as TSTF traveler TSTF-361-A, Revision 2 are made available for adoption in an application for license amendment by nuclear power plant licensees.

3.0 TECHNICAL EVALUATION

The purpose of the RHR System in MODE 6 is to remove decay heat and sensible heat from the Reactor Coolant System (RCS), to provide mixing of borated coolant, and to prevent boron stratification. Heat is removed from the RCS by circulating reactor coolant through the RHR heat exchangers where the heat is transferred to the component cooling water system. The coolant is then returned to the RCS via the RCS cold leg(s). Operation of the RHR system for normal cool-down decay heat removal is manually accomplished from the control room. The heat removal rate is adjusted by controlling the flow of reactor coolant through the RHR heat exchanger(s) and the bypass lines. Mixing of the reactor coolant is maintained by this continuous circulation of reactor coolant through the RHR System.

The change allows one of the RHR loops to be inoperable for up to 2 hours for required surveillance testing, provided the other RHR loop is operable and operating. The loss of one loop for a limited time will reduce the heat removal capability of the system. The licensee addressed time to bulk reactor coolant boil in the core, availability of borated water injection, and other evolutions that may reduce water level. Time to boil should be long enough that operators have time to take action to restore the inoperable loop to operation or add additional borated water to the reactor vessel. Operators should also consider whether systems are available to inject borated water into the reactor vessel. Also, further reductions in RCS water level should be evaluated before entering the LCO condition. These configurations and activities need to be carefully considered before entering the condition.

The NRC staff notes that the proposed change is consistent with the allowances that are currently in TS Section 3.4.8, "RCS Loops- Mode 5, Loops Not Filled," which is consistent with the plant condition allowed by TS Section 3.9.6.

Based on the above evaluations, the NRC staff finds that one RHR loop can be removed from service, as proposed by the licensee, for a limited amount of time with the operational restrictions described above. The TS change is consistent with TSTF-361-A, Revision 2.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified on October 20, 2011, 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. 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 (76 FR 28476). 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. M. J. Ajluni, SNC, letter to NRC, "License Amendment Request for Incorporation of Previously NRC Approved Technical Specification Task Force Standard Technical Specification Change Traveler TSTF-361-A, Revision 2, 'Allow Standby SDC/RHR/DRH Loop to Inoperable to Support Testing,'" dated March 14, 2011.
2. Industry Technical Specification Task Force Standard Technical Specification Change Traveler TSTF-361-A, Rev.2 "Allow Standby SDC/RHR/DHR Loop to Inoperable to Support Testing."

Principal Contributor: J. Miller

Date: November 9, 2011

M. Ajluni

- 2 -

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/

David H. Jaffe, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosures:

- 1. Amendment No. 163 to NPF-68
- 2. Amendment No. 145 to NPF-81
- 3. Safety Evaluation

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*SE transmitted by memo dated

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| DATE | 10/21/11 | 10/24/11 | 9/1/11 | 10/26/11 |
| OFFICE | OGC | NRR/LPL2-1/BC | NRR/LPL2-1/PM | |
| NAME | RHarper | GKulesa | DJaffe | |
| DATE | 11/7/11 | 11/9/11 | 11/9/11 | |

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