February 27, 2006

Mr. L. M. Stinson
Vice President - Farley Project
Southern Nuclear Operating
Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 RE: ISSUANCE OF AMENDMENTS (TAC NOS. MC8524 AND MC8525)

Dear Mr. Stinson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 171 to Renewed Facility Operating License No. NPF-2 and Amendment No. 164 to Renewed Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Units 1 and 2. The amendments consists of changes to the Technical Specifications (TS) in response to your application dated September 27, 2005.

The amendments revise the TS to eliminate the Power Range Neutron Flux—High Negative Rate Reactor trip Function.

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/

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

Docket Nos. 50-348 and 50-364

Enclosures:
1. Amendment No. 171 to NPF-2
2. Amendment No. 164 to NPF-8
3. Safety Evaluation

cc w/encl: See next page

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cc w/encl: See next page

DISTRIBUTION: See next page
*No Legal Objection
Package Number: ML053200004 Tech Spec Number: ML060590026 & ML060590027
Amendment Number: ML053190381 NRR-058

OFFICE	LPL2-1/PM	LPL2-1/LA	OGC	LPL2-1/BC
NAME	RMartin	RSola	GMLongo*	EMarinos
DATE	11/22/05	11/21/05	11/28/05	2/27/06

OFFICIAL RECORD COPY

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 RE: ISSUANCE OF AMENDMENTS (TAC NOS. MC8524 AND MC8525)

Date: February 27, 2006

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SOUTHERN NUCLEAR OPERATING COMPANY, INC.

ALABAMA POWER COMPANY

DOCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 171
Renewed License No. NPF-2

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Southern Nuclear Operating Company, Inc. (Southern Nuclear), dated September 27, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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;

   D. The issuance of this license 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 amended by 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-2 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 171, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented prior to startup following refueling outage 21 for Unit 1.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 27, 2006

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

ALABAMA POWER COMPANY

DOCKET NO. 50-364

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 164
Renewed License No. NPF-8

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Southern Nuclear Operating Company, Inc. (Southern Nuclear), dated September 27. 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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;

   D. The issuance of this license 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 amended by 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-8 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 164, are hereby incorporated in the license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented prior to startup following refueling outage 18 for Unit 2.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 27, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 171 and 164

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-2

DOCKET NO. 50-348

Replace the following pages of the Appendix A Technical Specifications and associated Bases with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
3.3.1-14	3.3.1-14
B 3.3.1-10	B 3.3.1-10
B 3.3.1-11	B 3.3.1-11
B 3.3.1-12	B 3.3.1-12
B 3.3.1-38	B 3.3.1-38

ATTACHMENT TO LICENSE AMENDMENT NO. 164

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-8

DOCKET NO. 50-364

Replace the following pages of the Appendix A Technical Specifications and associated Bases with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
3.3.1-14	3.3.1-14
B 3.3.1-11	B 3.3.1-11
B 3.3.1-12	B 3.3.1-12

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 171 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-2

AND AMENDMENT NO. 164 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-8

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-348 AND 50-364

1.0 INTRODUCTION

By letter dated September 27, 2005, the Southern Nuclear Operating Company, Inc. (the licensee) submitted a request for changes to the Joseph M. Farley Nuclear Plant (Farley), Units 1 and 2, Technical Specifications (TS). The requested changes would revise the TS to eliminate the Power Range Neutron Flux—High Negative Rate Reactor trip Function (Ref. 1). The request is based on the conclusion of the Westinghouse topical report (TR) WCAP-11394-P-A, "Methodology for the Analysis of the Dropped Rod Event," that has been reviewed and approved by the Nuclear Regulatory Commission (NRC) staff (Ref. 2). TR WCAP-11394-P-A supports the argument that there exists sufficient thermal margin for Westinghouse plant designs and fuel types to shut the reactor down, without crediting the Power Range Neutron Flux—High Negative Rate Reactor trip Function, regardless of the reactivity worth of the dropped rod cluster control assemblies (RCCAs) when confirmed on a plant-specific and a cycle-by-cycle basis.

2.0 EVALUATION

2.1 Regulatory Evaluation

The necessary and sufficient conditions for establishing limiting conditions of operation for a nuclear plant parameter are specified in the criteria listed in 10 CFR 50.36(c)(2)(ii)(A) - (D). In addition, the NRC staff has reviewed and approved TR WCAP-11394-P-A that includes the NRC staff evaluation and the conditions for its application.

2.2 Technical Evaluation

The negative flux rate trip (negative reactivity insertion) was established originally to end a rod drop or RCCA drop transient that could exceed the departure from nucleate boiling ratio (DNBR) limits. In 1982 Westinghouse submitted WCAP-10297, "Dropped Rod Methodology for Negative Flux Rate Trip Plants." WCAP-10297 concluded that the negative flux trip was required only if the plant exceeded a threshold value of reactivity worth, depending on plant design and fuel type. The Westinghouse Owners Group submitted WCAP-11394P entitled, "Methodology for the Analysis of the Dropped Rod Events," that was approved by the NRC staff. TR WCAP-11394-P-A concluded that the Westinghouse plants had sufficient reactivity margin that the negative flux trip was not required regardless of the rod or RCCA worth. TR WCAP-11394-P-A specified that the use of the method should be demonstrated subject to plant and fuel designs. The NRC staff noted in its approval of TR WCAP-11394-P-A that no further cycle specific review was necessary provided that the applicant stated that the analyses described in TR WCAP-11394-P-A has been performed and the results indicate that the Power Range Neutron Flux—High Negative Rate Reactor trip need not be assumed in the dropped RCCA analyses.

The Farley submittal stated that the related analyses do not assume reactor trip (or power reduction) to mitigate the consequences of the dropped RCCA. The analysis performed using the NRC approved methodology indicated that the DNBR design basis in the Updated Final Safety Analysis (UFSAR), Section 15.2.3.3 remains valid.

In addition to establishing the technical basis to eliminate Function 3.b of TS 3.3.1 it was necessary to assure that none of the four criteria of 10 CFR 50.36(c)(2)(ii)(A) - (D) were met.

The submittal has the following discussion for the four criteria:

- Criterion 1: Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

  Discussion: The Power Range Neutron Flux—High Negative Rate Reactor trip is not used for detection and indication in the control room of any degradation of the reactor coolant pressure boundary.

- Criterion 2: A process variable, design feature, or operating restrictions that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

  Discussion: The Power Range Neutron Flux—High Negative Rate Reactor trip is not an initial condition of a design basis accident or transient analysis.

- Criterion 3: A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Discussion: No credit is taken for the Power Range Neutron Flux—High Negative Rate Reactor trip in the Farley accident analysis. The Power Range Neutron Flux—High Negative Rate Reactor trip is not considered as part of the primary success path related to the integrity of a fission product barrier.

- Criterion 4: A structure, system, or component which operating experience or probabilistic risk assessment (PRA) has shown to be significant to public health and safety.

  Discussion: The Power Range Neutron Flux—High Negative Rate Reactor trip is not relied upon as a signal to initiate a reactor trip for any events modeled in the scope of the PRA model. The Power Range Neutron Flux—High Negative Rate Reactor trip is not significant to public health and safety in that no credit was taken for this trip in any accident analysis.

As indicated in the above, the licensee: (1) used the approved methodology in the analysis for the elimination of function 3.b for the high negative rate trip function and (2) indicated that this analysis will be part of the reload analysis for future cycles.

Finally, the licensee will modify the text in the TS Bases for limiting condition for operation (LCO) 3.3.1 associated with an unconservative local DNBR that is being deleted.

3.0 TECHNICAL SPECIFICATION CHANGES

The NRC staff reviewed the proposed TS changes LCO 3.3.1 and finds that they correctly reflect the proposed changes and are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of Alabama 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 installation or use of a facility component 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 (70 FR 67750). 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. Letter from L. M. Stinson, Southern Nuclear Operating Company, Incorporated to U.S. Nuclear Regulatory Commission “Request to Revise Technical Specifications to Delete Reactor Trip System, Function 3b, Power Range Neutron Flux—High Negative Rate,” dated September 27, 2005.

2. WCAP-11394-P-A, “Methodology for the Analysis of the Dropped Rod Event,” by R.L. Heasler, et al., Westinghouse Electric Corporation, January 1990.

Principal Contributor: L. Lois

Date: February 27, 2006

Joseph M. Farley Nuclear Plant, Units 1 & 2

cc:

Mr. J. R. Johnson
General Manager
Southern Nuclear Operating Company, Inc.
P.O. Box 470
Ashford, AL 36312

William D. Oldfield
SAER Supervisor
Southern Nuclear Operating Company, Inc.
P.O. Box 470
Ashford, AL 36312

Mr. B. D. McKinney, Licensing Manager
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

Mr. M. Stanford Blanton
Balch and Bingham Law Firm
P.O. Box 306
1710 Sixth Avenue North
Birmingham, AL 35201

Mr. J. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201

State Health Officer
Alabama Department of Public Health
434 Monroe St.
Montgomery, AL 36130-1701

Chairman
Houston County Commission
P.O. Box 6406
Dothan, AL 36302

Resident Inspector
U.S. Nuclear Regulatory Commission
7388 N. State Highway 95
Columbia, AL 36319