

September 2, 2008

Mr. J. Randy Johnson
Vice President - Farley
Joseph M. Farley Nuclear Plant
7388 North State Highway 95
Columbia, AL 36319

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 RE: ISSUANCE OF
AMENDMENTS (TAC NOS. MD7391 AND MD7392)

Dear Mr. Johnson:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 177 to Renewed Facility Operating License No. NPF-2 and Amendment No. 170 to Renewed Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated November 5, 2007 (Agencywide Document Access and Management System (ADAMS) Accession No. ML073100376), as supplemented by letter dated April 7, 2008, (ADAMS Accession No. ML080990386); Specifically, dates included in TS Section 5.5.17, "Containment Leakage Rate Testing Program," would be changed to resolve a timing conflict between the FNP, Unit 2 R20 refueling outage schedule and the 15-year test date for the FNP, Unit 2 Type A Containment Integrated Leak Rate Test (ILRT). Although Unit 1 does not have a current timing conflict, a similar Unit 1 change was requested for consistency.

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/

R. A. Jervy, 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. 177 to NPF-2
2. Amendment No. 170 to NPF-8
3. Safety Evaluation

cc w/encl: See next page

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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 next biweekly *Federal Register* notice.

Sincerely,

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R. A. Jervey, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
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cc w/encl: See next page

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Package No.: ML081630497

Amendment No.: ML081630479 Tech Spec No.: ML081660009

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NRR/ITSB	NRR/EMCB	NRR/SCVB	OGC	NRR/LPL2-1/BC	NRR/LPL2-1/PM
NAME	RJervey	GLappert	RElliott	KManoly	RDennig	MSimon	MWong	RJervey
DATE	08/07/08	08/7/08	08/06/08	05/28/08	06/02/08	07/18/08	08/14/08	9/2/08

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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. 177
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 November 5, 2007, as supplemented April 7, 2008, 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. 177, 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 within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Melanie C. Wong, 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: September 2, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 177
TO RENEWED FACILITY OPERATING LICENSE NO. NPF-2
DOCKET NO. 50-348
AND ATTACHMENT TO LICENSE AMENDMENT NO. 170
TO RENEWED FACILITY OPERATING LICENSE NO. NPF-8
DOCKET NO. 50-364

Replace the following pages of the Renewed Facility Operating License Nos. NPF-2 and NPF-8 and Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

License No. NPF-2 Page 4
License No. NPF-8 Page 3

TS Page
5.5-13

Insert

License No. NPF-2 Page 4
License No. NPF-8 Page 3

5.5-13

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. 170
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 November 5, 2007, as supplemented April 7, 2008, 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. 170, 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 within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Melanie C. Wong, 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: September 2, 2008

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 177 TO
RENEWED FACILITY OPERATING LICENSE NO. NPF-2
AND AMENDMENT NO. 170 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 application dated November 5, 2007, to the U.S. Nuclear Regulatory Commission (NRC) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML073100376), and supplemented by letter dated April 7, 2008, (ADAMS Accession No. ML080990386), the Southern Nuclear Operating Company, Inc. (SNC, the licensee) submitted a request for changes to the Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2, Technical Specifications (TS). The requested changes would revise Facility Operating License No. NPF-2 and Facility Operating License No. NPF-8 for FNP, Units 1 and 2, respectively. Specifically, dates included in TS Section 5.5.17, "Containment Leakage Rate Testing Program," would be changed to resolve a timing conflict between the Unit 2 R20 refueling outage schedule and the 15-year test date for the FNP Unit 2 Type A Containment Integrated Leak Rate Test (ILRT), which has a required completion date of March 2010. A similar Unit 1 change is proposed for consistency.

The April 7, 2008, letter provided clarifying information that did not change the November 5, 2007 application and the initial proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix J, Option B requires that a Type A test be conducted at periodic intervals based on historical performance of the overall containment system. Farley TS 5.5.17, "Containment Leakage Rate Testing Program," requires that leakage rate testing be performed as required by 10 CFR Part 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995. This RG endorses, with certain exceptions, Nuclear Energy Institute (NEI) report NEI 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated July 26, 1995.

The Type A test is an overall (integrated) leakage rate test of the containment structure. NEI 94-01 specifies an initial test interval of 48 months, but allows an extended interval of 10 years, based upon two consecutive successful tests. There is also a provision for extending the test interval an additional 15 months in certain circumstances. The most recent two Type A tests at Farley for each unit have been successful, so the current test interval requirement would normally be 10 years. However, in a request dated April 4, 2002, (ADAMS Accession No. ML020990040, the licensee proposed a one-time deferral of the Type A ILRT by extending the ten (10) year interval to fifteen (15) years. On March 21, 2003, the NRC staff granted this request via License Amendment Nos. 159 and 150 for FNP Units 1 and 2, respectively (ADAMS Accession No. ML030800326). Based on the approved change, the current TS require the next Type A test to be performed by March 2009 for Unit 1 and March 2010 for Unit 2.

3.0 TECHNICAL EVALUATION

The FNP Units 1 and 2 containments are prestressed, reinforced concrete cylindrical structures with a shallow domed roof and a reinforced concrete foundation slab with provision for a reactor cavity at the center. The cylindrical portion of the containment is prestressed by a post-tensioning system composed of horizontal and vertical tendons. The dome has a three-way tendon pattern in which groups of tendons intersect at 120 degrees. The concrete foundation is a conventionally reinforced mat. A continuous access gallery is provided beneath the base slab for installation and inspection of the vertical tendons. A 1/4-inch thick welded steel liner is attached to the inside face of the concrete. The floor liner is installed on top of the foundation slab and is then covered with concrete. There are also penetrations (piping and electrical, an equipment hatch, and personnel-locks) that pass through the containment pressure boundary. The leak tight integrity of the penetrations and isolation valves are verified through Type B and Type C local leak rate tests (LLRTs) and the overall leak-tight integrity and structural integrity of the primary containment is verified through a Type A integrated leak rate test (ILRT)

The licensee is requesting an extension to the date required to conduct the next Type A test for both Unit 1 and Unit 2. The current requirement specifies that "The next Type A test, after the March 1994 test for Unit 1 and the March 1995 test for Unit 2, shall be performed within 15 years"... Specifically, the licensee is proposing to conduct the next Type A test during refueling outage R22 (Spring 2009) for Unit 1 and during refueling outage R20 (Spring 2010) for Unit 2. In the licensee's supplemental letter dated April 7, 2008, the licensee clarified that these outages will start no later than April 18, 2009, for the Unit 1 Spring 2009 refueling outage and April 24, 2010, for the Unit 2 Spring 2010 refueling outage. Thus, the licensee's request amounts to an extension of approximately one month for each unit, over and above the 5-year extension that was granted March 21, 2003.

Industry experience has demonstrated that Type B and C testing detect a large percentage of containment leakage and that the percentage of containment leakage detected by Type A testing is very small. Extending the test interval by approximately one month does not significantly increase potential leakage paths not otherwise identified by Type B and C testing. In the NRC's previously approved extension of the ILRT, the interval was extended from 10 to 15 years. The test interval extension was supported by the licensee's risk assessment, which was reviewed and documented in the associated Safety Evaluation (SE). This SE concluded that the combined risk impact of the test interval extension, in terms of total integrated plant risk, large early release frequency, and conditional containment failure probability, is small and supportive of the change.

The licensee did not perform a risk assessment of further extending the test interval for the ILRT by one more month. However, the NRC staff has determined that an additional risk assessment is not warranted in this particular case due to the relatively small interval extension. The licensee justified the previous change based on historical plant specific containment leakage testing program results and containment in-service inspection program (CISI) results, supported by a risk-informed analysis. Because of the short extension sought, the basis and conclusions previously determined in SNC letters dated April 4, 2002 (ADAMS Accession No. ML020990040) and January 9, 2003 (ADAMS accession No. ML030140064) are valid and remain unchanged.

The NRC staff concluded that the existing program is sound and adequately manages the structural and leak tight integrity of FNP Units 1 and 2. Based on a review of the previously approved Type A test extension and its associated risk assessment, the licensee's CISI results, and the limited additional time added to the interval, it is concluded that reasonable assurance of safety will be maintained, and that the requested extension should be granted.

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 [and change the surveillance requirements]. 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 [73 FR 5229]. 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 Contributors: B. Lee
H. Ashar
B. Titus
N. Karipineni

Date: September 2, 2008

Joseph M. Farley Nuclear Plant, Units 1 & 2

cc:

Mr. J. Randy Johnson
Vice President - Farley
Joseph M. Farley Nuclear Plant
7388 North State Highway 95
Columbia, AL 36319

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

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