

June 7, 2001

Mr. D. N. Morey  
Vice President - Farley Project  
Southern Nuclear Operating  
Company, Inc.  
Post Office Box 1295  
Birmingham, Alabama 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 RE: ISSUANCE OF  
AMENDMENTS (TAC NOS. MB0100 AND MB0101)

Dear Mr. Morey:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 149 to Facility Operating License No. NPF-2 and Amendment No. 141 to Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated August 17, 2000, as supplemented by letter dated April 2, 2001. The April 2, 2001, letter requested a new implementation date, but did not change the August 17, 2000, application and the initial proposed no significant hazards consideration determination.

The amendments eliminate the need for the licensee to perform periodic response time testing of selected reactor trip system and engineered safety feature actuation system equipment as defined in Westinghouse report WCAP-14036-P-A, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests."

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/

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

Docket Nos. 50-348 and 50-364

Enclosures:

1. Amendment No. 149 to NPF-2
2. Amendment No. 141 to NPF-8
3. Safety Evaluation

cc w/encs: See next page

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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 FACILITY OPERATING LICENSE

Amendment No. 149  
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 August 17, 2000, as supplemented by letter dated April 2, 2001, 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 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. 149 , 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 on Unit 1 entry in Mode 3 for Cycle 18 following the 2001 fall refueling.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Richard L. Emch, Jr., Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 7, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 149

TO FACILITY OPERATING LICENSE NO. NPF-2

DOCKET NO. 50-348

ATTACHMENT TO LICENSE AMENDMENT NO. 141

TO FACILITY OPERATING LICENSE NO. NPF-8

DOCKET NO. 50-364

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

Remove

1.1-3  
1.1-4  
1.1-5  
1.1-6  
B 3.3.1-58  
B 3.3.1-59  
B 3.3.1-60  
B 3.3.2-46  
B 3.3.2-47  
B 3.3.2-48

Insert

1.1-3  
1.1-4  
1.1-5  
1.1-6  
B 3.3.1-58  
B 3.3.1-59  
B 3.3.1-60  
B 3.3.2-46  
B 3.3.2-47  
B 3.3.2-48

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

ALABAMA POWER COMPANY

DOCKET NO. 50-364

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 141  
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 August 17, 2000, as supplemented by letter dated April 2, 2001, 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 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. 141 , 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 on Unit 1 entry in Mode 3 for Cycle 18 following the 2001 fall refueling.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Richard L. Emch, Jr., Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 7, 2001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 149 TO FACILITY OPERATING LICENSE NO. NPF-2  
AND AMENDMENT NO. 141 TO FACILITY OPERATING LICENSE NO. NPF-8  
SOUTHERN NUCLEAR OPERATING COMPANY, INC., ET AL.  
JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-348 AND 50-364

## 1.0 INTRODUCTION

By letter dated August 17, 2000, as supplemented by letter dated April 2, 2001, Southern Nuclear Operating Company, Inc. (SNC) et al., submitted a request for changes to the Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2, Technical Specifications (TS). The requested changes would eliminate the need for the licensee to perform periodic response time testing of selected Reactor Trip System (RTS) and Engineered Safety Feature Actuation System (ESFAS) equipment as defined in Westinghouse (WOG) report WCAP-14036-P-A, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests." The specific TS changes are:

- a. TS 1.1, Definition, for RTS and ESFAS,
- b. TS Bases for Surveillance Requirements (SRs) 3.3.1.14, and 3.3.2.9, and
- c. TS Bases References

The April 2, 2001, letter requested a new implementation date, but did not change the August 17, 2000, application and the initial proposed no significant hazards consideration determination.

## 2.0 BACKGROUND

The current FNP TS 1.1, Definitions for ESF and RTS, states: "The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured." This requirement for channel response time tests (RTT) is also specified in TS Bases for SRs 3.3.1.14 and SR 3.3.2.9.

In August 1995, the WOG issued Topical Report, WCAP-13632, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," which the Nuclear Regulatory Commission (NRC) approved by letter dated September 5, 1995, and the WOG issued WCAP-13632-P-A, Revision 2, in January 1996.

In October 1995, the SNC incorporated the requirements for sensor RTT for FNP, Unit 1 by Amendment No. 116 and Unit 2 by Amendment No. 108, which were approved by the NRC by letter dated September 28, 1995.

In December 1995, the WOG issued Topical Report, WCAP-14036, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests." the NRC approved this report by letter dated October 6, 1998, and the WOG issued WCAP-14036-P-A, Revision 1, in October 1998. This report concluded that RTT requirements for selected protection channel components in RTS and ESFAS could be eliminated by summing a bounding response time with measured response time of the remainder of the channel. The staff concluded, "The equipment and boards covered in this report can either result in increases in response time of that equipment no greater than the bounding response time, or can be detected during the performance of other surveillance tests, principally calibration. Accordingly, the staff concludes that the performance of periodic RTT for selected protection equipment identified in the topical report can be eliminated from the TS and that bounding response times may be used to verify RTS and ESFAS channel response times."

### 3.0 EVALUATION

#### a. TS 1.1, Definition:

The licensee proposes to add the following statement to the current RTS and ESFAS definitions: "In lieu of measurement, response time may be verified for selected components provided that the components and the methodology for verification have been previously reviewed and approved by the NRC."

In the Safety Evaluation Report approving WCAP-14036, Revision 1, the staff stated: "The licensee must verify that the Failure Modes and Effects Analysis (FMEA) in WCAP-14036, Revision 1, is applicable to the equipment actually installed in the licensee's facility, and that the analysis is valid for the versions of the boards used in their protection system." The licensee stated that the RTS and ESF equipment installed at FNP are Westinghouse 7300 Process Protection System, Nuclear Instrumentation System (NIS), and Solid State Protection System (SSPS). The licensee has verified that the equipment and the associated component boards used in FNP are the same as the equipment and boards described in the topical report. Furthermore, the licensee has committed that they will administratively control maintenance and design modifications on RTS and ESF protection equipment to ensure that any circuit board or component replacement will be verified to be equal or equivalent to the model and revision level approved by the NRC staff in WCAP-14036-P-A, Revision 1, or in a subsequent licensing submittal.

The staff concludes that this modification satisfies WCAP-14036-P-A and is, therefore, acceptable.

#### b. TS Bases for SRs 3.3.1.14 and 3.3.2.9:

The current Bases for SR 3.3.1.14 state: "The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor to the point at which the equipment reaches the required functional state (i.e., control and shutdown rods

fully inserted in the reactor core)." The licensee stated that this statement is not correct because, as stated in the Final Safety Analysis Report (FSAR) Chapter 15.1.5, this time is modeled up to dashpot entry and measured as defined in SR 3.1.4.3. The licensee proposes to modify the current Bases for SR 3.3.1.14 by stating: "The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the trip setpoint value at the sensor to the point when the rods are free to fall (i.e., control and shutdown loss of control rod drive mechanism (CRDM) stationary gripper voltage including gripper release delay time (Ref. 15))."

In Technical Bulletin NSD-TB-92-03-R1, "Undervoltage Trip Protection," dated April 13, 1994, Westinghouse identified that the RTS response time should include the time delay associated with the stationary gripper release. Technical Bulletin NSD-TB-92-03-R1 addressed the need to account for delay in reactor coolant pump bus voltage decay caused by electromotive voltage produced by slowing motors. FNP's current FSAR Chapter 15.1.3 conforms to the Westinghouse Bulletin, and the proposed modification to the Bases for SR 3.3.1.14 addresses this delay in gripper release.

The licensee also proposed a number of editorial changes to bring SR 3.3.1.14 and SR 3.3.2.9 in conformance with FNP's FSAR and actual plant configuration.

Based on the justifications provided by the licensee, the staff concludes that the proposed changes are acceptable.

c. TS Bases References:

The licensee proposes to add the following references in the Bases Reference Section:

- WCAP-13632-P-A, Revision 2,
- WCAP-14036-P-A, Revision 1, and
- NSD-TB-92-03-R1

The staff concludes that addition of these references is acceptable.

In conclusion, the licensee proposes to eliminate the response time testing of selected RTS and ESFAS channels in conformance to WCAP-14036-P-A, Revision 1. In justifying the proposed changes the licensee addressed all the requirements the NRC specified in approving the WCAP. The licensee also incorporated the time delay associated in the control rod gripper release in SR 3.3.1.14 in conformance with Westinghouse Technical Bulletin NSD-TB-92-03-R1. Furthermore, the licensee intends to incorporate editorial changes to make the TS conform with the FSAR and existing plant configurations. Based on the justifications provided by the licensee, the staff concludes that the proposed TS changes are acceptable. The NRC has approved elimination of RTT for other PWR plants in the recent past.

#### 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 (66 FR 2023). 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: S. Mazumdar, EEIB/DE

Date: June 7, 2001

Joseph M. Farley Nuclear Plant

cc:

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