

March 8, 2002

Mr. Stephen A. Byrne
Senior Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 - ISSUANCE OF
AMENDMENT RE: SOURCE RANGE NEUTRON FLUX INSTRUMENTATION
(TAC NO. MB2821)

Dear Mr. Byrne:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 157 to Facility Operating License No. NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1. The amendment changes the Technical Specifications (TS) in response to your application dated August 7, 2001.

This amendment adds a response time requirement to the TS for the Source Range Neutron Flux Reactor Trip function.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Bi-weekly Federal Register notice. This completes the staff's efforts on TAC No. MB2821.

Sincerely,

/RA/

Gordon E. Edison, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosures:

1. Amendment No. 157 to NPF-12
2. Safety Evaluation

cc w/enclosures: See next page

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SOUTH CAROLINA ELECTRIC & GAS COMPANY

SOUTH CAROLINA PUBLIC SERVICE AUTHORITY

DOCKET NO. 50-395

VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 157
License No. NPF-12

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by South Carolina Electric & Gas Company (the licensee), dated August 7, 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 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-12 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 157, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. South Carolina Electric & Gas Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Leonard N. Olshan for/

Richard J. Laufer, Acting 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: March 8, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 157

TO FACILITY OPERATING LICENSE NO. NPF-12

DOCKET NO. 50-395

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove Page

Insert Page

3/4 3-9

3/4 3-9

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 157 TO FACILITY OPERATING LICENSE NO. NPF-12
SOUTH CAROLINA ELECTRIC & GAS COMPANY
SOUTH CAROLINA PUBLIC SERVICE AUTHORITY
VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1
DOCKET NO. 50-395

1.0 INTRODUCTION

By application dated August 7, 2001, South Carolina Electric & Gas Company proposed a license amendment to change the Technical Specifications (TS) for Virgil C. Summer Nuclear Station. The proposed changes would revise TS Table 3.3-2 by specifying the source range neutron flux (SRNF) reactor trip instrumentation response to be <0.5 seconds. The current TS Table 3.3-2 indicates "Not Applicable" for the response time of the SRNF reactor trip instrumentation.

2.0 EVALUATION

In its Nuclear Safety Advisory Letter NSAL-00-016 dated December 4, 2000, Westinghouse identified an issue regarding the protection functions assumed for the typical Final Safety Analysis Report (FSAR) safety analysis of the Uncontrolled Rod Cluster Control Assembly Bank Withdrawal from a Low Power or Subcritical Condition (RWFS) event. In the safety analysis of this event currently documented in the FSAR, the primary protection for this event is provided by the Power Range Neutron Flux (PRNF) - Low Setpoint. However, for an RWFS event with the plant operating in Modes 3, 4, or 5, where the PRNF is not required to be operable, the SRNF is implicitly credited as the primary protection function and it is assumed that an RWFS event occurring in Modes 3, 4, or 5 is bounded by the standard FSAR analysis performed in Mode 2. Although the SRNF reactor trip function is typically not time response tested, Westinghouse suggested that in order to credit the SRNF reactor trip function for RWFS in Modes 3, 4, or 5, the time response issue must be addressed in the TS.

To address the SRNF time response issue raised in Westinghouse NSAL-00-016, the licensee proposed a change to TS Table 3.3-2, "Reactor Trip System Instrumentation Response Times" at the V. C. Summer Nuclear Station to require a response time test of <0.5 seconds for the SRNF reactor trip instrumentation. This proposed time response for the SRNF is consistent with the current time response required for the PRNF currently specified in TS Table 3.3-2, which is also consistent with the time response assumed in the safety analysis for the RWFS event. The staff has evaluated the licensee's proposed change and finds that the proposed response time of <0.5 seconds for the SRNF reactor trip instrumentation is acceptable. Our

conclusion is based on the following: 1) the consequences of an RWFS occurring from Mode 3, 4, or 5 are less severe than from Mode 2 due to a lower reactivity level of the reactor under subcritical conditions (Modes 3, 4, or 5); 2) if the response time of the reactor protection system is the same, the analysis of the RWFS event in Mode 2 will bound the event occurring in Modes 3, 4, or 5; and 3) the proposed change provides a more restrictive requirement for the operability of the SRNF reactor trip instrumentation relative to the requirement of the current TS at the V. C. Summer Nuclear Station.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of South Carolina official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 amendment involves no significant increase in the amounts, and no significant changes 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (67 FR 5332). Accordingly, the amendment meets 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 amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed in section 2.0 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: C. Liang

Date: March 8, 2002

Mr. Stephen A. Byrne
South Carolina Electric & Gas Company

VIRGIL C. SUMMER NUCLEAR STATION

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