

June 22, 1993

Docket No. 50-395

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See attached page

Mr. John L. Skolds
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

Dear Mr. Skolds:

SUBJECT: ISSUANCE OF AMENDMENT NO.112 TO FACILITY OPERATING LICENSE NO.
NPF-12 REGARDING THE MOTOR DRIVEN EMERGENCY FEEDWATER PUMP -
VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 (TAC NO. M84652)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 112 to Facility Operating License No. NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated September 8, 1992.

The amendment changes the Surveillance Requirements to the motor driven emergency feedwater pump to require that the minimum discharge pressure acceptance limit be 1600 psig at a minimum flow greater than or equal to 90 gallons per minute.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Bi-weekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:

George F. Wunder, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 112 to NPF-12
2. Safety Evaluation

cc w/enclosures:
See next page

OFC	LA: PD21:DRPE	PM: PD21:DRPE	SPLB	OGC	AD: PD21:DRPE
NAME	PAnderson	GWunder:dt	CMcCracken	EHoller	SBajwa
DATE	06/2/93	06/02/93	06/9/93	06/9/93	06/22/93

Document Name: SUM84652.AMD

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Mr. John L. Skolds
South Carolina Electric & Gas Company

Virgil C. Summer Nuclear Station

cc:

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AMENDMENT NO. 112 TO FACILITY OPERATING LICENSE NO. NPF-12 - SUMMER, UNIT NO. 1

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cc: Summer Service List

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

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. 112
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 September 8, 1992, 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. 112, 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



S. Singh Bajwa, Acting Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 22, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 112

TO FACILITY OPERATING LICENSE NO. NPF-12

DOCKET NO. 50-395

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised page is indicated by marginal lines.

Remove Pages

3/4 7-4

Insert Pages

3/4 7-4

PLANT SYSTEMS

EMERGENCY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator emergency feedwater pumps and flow paths shall be OPERABLE with:

- a. Two motor-driven emergency feedwater pumps, each capable of being powered from separate emergency busses, and
- b. One steam turbine driven emergency feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one emergency feedwater pump inoperable, restore the required emergency feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With two emergency feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- c. With three emergency feedwater pumps inoperable, immediately initiate corrective action to restore at least one emergency feedwater pump to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each emergency feedwater pump shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
 1. Verifying that each motor driven pump develops a discharge pressure greater than or equal to 1600 psig at greater than or equal to 90 gpm flow.
 2. Verifying that the steam turbine driven pump develops a discharge pressure greater than or equal to 1330 psig at a flow greater than or equal to 97 gpm when the secondary steam supply pressure is greater than 900 psig. The provisions of Specification 4.0.4 are not applicable.
 3. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 112 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 letter dated September 8, 1992, South Carolina Electric & Gas Company (the licensee) submitted a request for changes to Surveillance Requirement 4.7.1.2 for the Virgil C. Summer Nuclear Station, Unit No. 1 (Summer Station) Technical Specifications (TS). The requested changes would revise the motor driven emergency feedwater (EFW) pump minimum discharge pressure acceptance limit from 1350 psig to 1600 psig at a minimum flow greater than or equal to 90 gallons per minute (gpm).

2.0 EVALUATION

The design basis for the EFW system requires, as a minimum, that one motor driven EFW pump be capable of providing a total flow of 380 gpm to two intact steam generators at a steam generator pressure of 1211 psig. This requirement takes into consideration the single failure of the redundant motor driven EFW pump. Each motor driven EFW pump has a minimum recirculation flow rate of 90 gpm which, when added to the 380 gpm flow requirement, results in a total required flow rate of 470 gpm at a steam generator pressure of 1211 psig. There is approximately a 6.8 percent margin between this point and the corresponding point at 470 gpm on the manufacturers certified pump performance curve. This margin represents the allowed pump performance degradation.

Surveillance testing of the EFW pumps is performed at the 90 gpm minimum recirculation flow rate. After applying the 6.8 percent margin mentioned above, this corresponds to a pressure of approximately 1555 psig on the manufacturers pump curve. The licensee has determined that emergency diesel generator voltage and frequency fluctuations could result in flow changes of up to ± 1.5 percent and head changes of up to ± 3.0 percent. To account for these fluctuations, the licensee has requested a minimum acceptable pump discharge pressure of 1600 psig.

The staff has reviewed the licensee's request and has determined that the proposed minimum discharge pressure of 1600 psig is based on the application of conservative margins to the manufacturer's pump curve; furthermore, the 1600 psig pressure is more restrictive than the 1350 psig pressure currently in the TS. The staff has concluded, therefore, that the proposed changes are acceptable.

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 the Surveillance Requirements. The staff has determined that the amendment involves 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 amendment involves no significant hazards consideration and there has been no public comment on such finding (57 FR 55590). 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 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: T. Farnholtz

Date: June 22, 1993