



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

April 1, 1985

Docket No. 50-395

Mr. O. W. Dixon, Jr.  
Vice President Nuclear Operations  
South Carolina Electric & Gas Company  
P.O. Box 764 (Mail Code 167)  
Columbia, South Carolina 29218

Dear Mr. Dixon:

Subject: Issuance of Amendment No. 38 to Facility Operating  
License NPF-12 Virgil C. Summer Nuclear Station,  
Unit No. 1

The Nuclear Regulatory Commission has issued Amendment No. 38 to Facility Operating License NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1 located in Fairfield County, South Carolina. This amendment is in response to your letter dated November 29, 1984, and revised January 8, 1985.

The amendment modifies the Technical Specifications to add a new specification regarding requirements for circuit breakers for non-Class 1E cable. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No. 38 to Facility Operating License NPF-12 is enclosed.

Sincerely,

*Elinor G. Adensam*

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosures:

1. Amendment No. 38
2. Safety Evaluation

cc w/enclosure:  
See next page

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*J. M. Clem*

SUMMER (Amendment & Order)

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April 1, 1985

AMENDMENT NO.38 TO FACILITY OPERATING LICENSE NO. NPF-12 - Virgil C. Summer Unit 1

DISTRIBUTION w/enclosures:

✓ Docket No. 50-395

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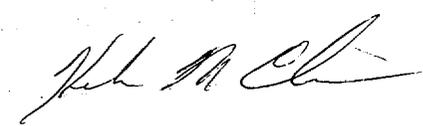
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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. 38  
License No. NPF-12

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Virgil C. Summer Nuclear Station, Unit No. 1 (the facility) Facility Operating License No. NPF-12 filed by the South Carolina Electric & Gas Company acting for itself and South Carolina Public Service Authority (the licensees), dated November 29, 1984, and revised January 8, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the 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 set forth in 10 CFR Chapter I;
  - 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;
  - E. The issuance of this license 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 hereby amended by page changes to the Technical Specifications as indicated in the attachments 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

The Technical Specifications contained in Appendix A, as revised through Amendment No. 38 are hereby incorporated into this license. South Carolina Electric & Gas Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*Elinor G. Adensam*

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosure:  
Technical Specification Changes

Date of Issuance: April 1, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 38

FACILITY OPERATING LICENSE NO. NPF-12

DOCKET NO. 50-395

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. Corresponding overleaf pages are also provided to maintain document completeness.

<u>Amended Pages</u>	<u>Overleaf Pages</u>
IX	X
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3/4 8-64 (new page)	
B 3/4 8-3	

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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### LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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## ELECTRICAL POWER SYSTEMS

### CIRCUIT PROTECTION DEVICES

#### LIMITING CONDITION FOR OPERATION

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3.8.4.3 Circuit breakers for non-Class 1E cables located in trays which do not have cable tray covers and which provide protection for cables that if faulted could cause failure in both adjacent, redundant Class 1E cables shall be OPERABLE.

APPLICABILITY: All modes

ACTION:

- a. With one or more of the above required non-Class 1E circuit breaker(s) inoperable, within 72 hours, either:
  1. Restore the circuit breaker(s) to OPERABLE status; or
  2. De-energize the circuit breaker(s); or
  3. Establish a one (1) hour roving fire watch for those areas in which redundant systems or components could be damaged.
- b. The provisions of Specification 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.8.4.3 The above required circuit breakers shall be demonstrated OPERABLE.

- a. At least once per eighteen (18) months:
  1. By verifying that the medium voltage (7.2 KV) circuit breakers are OPERABLE by selecting, on a rotating basis, at least 10% of the circuit breakers and performing the following:
    - (a) A CHANNEL CALIBRATION of the associated protective relays, and
    - (b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and control circuits function as designed.
    - (c) For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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2. By selecting and functionally testing a representative sample of at least ten percent (10%) of each type of lower voltage circuit breakers. Circuit breakers selected for functional testing shall be selected on a rotating basis. Testing of these circuit breakers shall consist of injecting a current in excess of the breaker's nominal setpoint and measuring the response time. The measured response time will be compared to the manufacturer's data to insure that it is less than or equal to a value specified by the manufacturer. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least ten percent (10%) of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.
- b. At least once per sixty (60) months by subjecting each circuit breaker to an inspection and preventive maintenance in accordance with procedures prepared in conjunction with its manufacturer's recommendations.

## ELÉCTRICAL POWER SYSTEMS

### BASES

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#### 3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

Containment electrical penetrations and penetration conductors are protected by either deenergizing circuits not required during reactor operation or by demonstrating the OPERABILITY of primary and backup overcurrent protection circuit breakers during periodic surveillance.

The surveillance requirements applicable to lower voltage circuit breakers and fuses provide assurance of breaker and fuse reliability by testing at least one representative sample of each manufacturer's brand of circuit breaker and/or fuse. Each manufacturer's molded case and metal case circuit breakers and/or fuses are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers and/or fuses are tested. If a wide variety exists within any manufacturer's brand of circuit breakers and/or fuses, it is necessary to divide that manufacturer's breakers and/or fuses into groups and treat each group as a separate type of breaker or fuses for surveillance purposes.

The OPERABILITY of the motor operated valves thermal overload protection and/or bypass devices ensures that these devices will not prevent safety-related valves from performing their function. The Surveillance Requirements for demonstrating the OPERABILITY of these devices are in accordance with Regulatory Guide 1.106, "Thermal Overload Protection for Electric Motors on Motor Operated Valves," Revision 1, March 1977.

The surveillance requirements of the circuit breakers for non-Class 1E cables located in trays which do not have cable tray covers and which provide protection for cables that, if faulted, could cause failure in both adjacent, redundant Class 1E cables ensures that the integrity of Class 1E cables is not compromised by the failure of protection devices to operate in the non-Class 1E cables.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NPF-12

SOUTH CAROLINA ELECTRIC & GAS COMPANY  
SOUTH CAROLINA PUBLIC SERVICE AUTHORITY

I. INTRODUCTION

By letters dated November 29, 1984, and January 8, 1985, South Carolina Electric and Gas Company (SCE&G or licensee) requested an amendment to the V. C. Summer Technical Specifications. The amendment would add a new Technical Specification 3/4.8.4.3, "Circuit Protection Devices," regarding requirements for circuit breakers for non-Class 1E cable. Additional information relating to this request was provided by letter dated February 6, 1985.

II. EVALUATION

The NRC staff conditioned the operating license (NPF-12, license condition 2.C.(16)) to require that certain modifications be made to separation between Class 1E and non Class 1E cable trays. These modifications consisted of providing covers or barriers between the non Class 1E cable trays and at least one of the Class 1E cable trays, or to demonstrate that faults induced in non Class 1E cable trays will not cause failure of cables in the adjacent Class 1E cable trays. The information required from the applicant was required to demonstrate that the associated cable protective device will clear the imposed fault condition without exceeding the I<sup>2</sup>t rating of the cable (before the ignition temperature of the cable insulation is reached).

By letter dated November 29, 1984, the licensee stated that the above task has been accomplished by providing cable tray covers on some cable trays and by periodic testing of certain cable and equipment protective devices via station Electrical Maintenance Procedures. As required, the licensee also submitted a proposed change to the Technical Specifications which incorporates the additional testing requirements of the cable and equipment protective devices. By letter dated February 6, 1985, the licensee provided additional information to substantiate that these protective devices are sized to clear the imposed fault condition without exceeding the I<sup>2</sup>t rating of the cable. The staff has reviewed the information submitted by the licensee and finds it acceptable. Therefore, the proposed Technical Specification 3/4.8.4.3 is approved.

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### III. ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the use of a facility component located within the restricted area as defined in 10 CFR Part 20 and in 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 this amendment.

### IV. CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (50 FR 8007) on February 27, 1985, and consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Jon B. Hopkins, Licensing Branch No. 4, DL  
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Dated: April 1, 1985