

May 1, 1991

Docket No. 50-395

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

Dear Mr. Skolds:

SUBJECT: ISSUANCE OF AMENDMENT NO. 98 TO FACILITY OPERATING LICENSE
NO. NPF-12 REGARDING ELECTRICAL POWER SYSTEM SURVEILLANCE
REQUIREMENTS - VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1,
(TAC NO. 79231)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 98 to Facility Operating License No. NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1 (Summer Station). The amendment consists of changes to the Technical Specifications (TS) in response to your application dated November 26, 1990.

The amendment changes the Technical Specifications to delete surveillance requirement 4.8.1.1.1.b. The surveillance requirement, which is to demonstrate the operability of the offsite preferred power sources, is not applicable to Summer Station. In addition, it makes editorial changes to TS 3.8.1.1.1 to reflect the deletion of the Surveillance Requirement.

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. 98 to NPF-12
2. Safety Evaluation

cc w/enclosures:
See next page

OFC	:LA:PD21:DRPE:PM:PD21:DRPE:OGC	:AD:PD21:DRPE:	:
NAME	:PAnderson:GWunder:dt	:AMendiola	:
DATE	:4/10/91 : 4/11/91 : 4/15/91	: 4/11/91	:

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Document Name: SUMMER MASTER AMENDMENT

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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. 98 TO FACILITY OPERATING LICENSE NO. NPF-12 - SUMMER, UNIT No. 1

Docket File

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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. 98
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 November, 26, 1990, 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:

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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 98, 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

Original signed by:

Anthony Mendiola, 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: April 29, 1991

OFC	:LA:PD21:DRPR:PM:PD21:DRPR:AD:PD32:DRPR	:	:	:	:
NAME	:PAnderson: GWhitner:dt :AMendiola	:	:	:	:
DATE	:4/10/91 :04/11/91 :4/11/91	:	:	:	:

ATTACHMENT TO LICENSE AMENDMENT NO. 98
TO 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 indicated by marginal lines.

Remove Pages

3/4 8-1

3/4 8-2

3/4 8-2a

3/4 8-3

Insert Pages

3/4 8-1

3/4 8-2

3/4 8-2a

3/4 8-3

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent Emergency Diesel Generators (EDG), each with:
 1. A separate day fuel tank containing a minimum volume of 300 gallons of fuel,
 2. A separate fuel storage system containing a minimum volume of 47,100 gallons of fuel, and
 3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one offsite circuit of 3.8.1.1.a inoperable:
 1. Demonstrate the OPERABILITY of the remaining offsite A.C. sources by performing Surveillance Requirement 4.8.1.1.1 within 1 hour and at least once per 8 hours thereafter, and
 2. If either EDG has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.3 separately for each such EDG within 24 hours unless the diesel is already operating, and
 3. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With one EDG of 3.8.1.1.b inoperable:
 1. Demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1 within 1 hour and at least once per 8 hours thereafter, and
 2. If the EDG became inoperable due to any cause other than preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining EDG by performing Surveillance Requirements 4.8.1.1.2.a.3 within 24 hours*, and

*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

3. Within 2 hours, verify that required systems, subsystems, trains components and devices that depend on the remaining EDG as a source of emergency power are also OPERABLE and in MODE 1, 2, or 3, that the Turbine Driven Emergency Feed Pump is OPERABLE. If these conditions are not satisfied within 2 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 4. Restore the EDG to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With one offsite circuit and one EDG inoperable:
1. Demonstrate the OPERABILITY of the remaining offsite A.C. source by performing Surveillance Requirement 4.8.1.1.1 within one hour and at least once per 8 hours thereafter, and
 2. If the EDG became inoperable due to any cause other than preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining EDG by performing Surveillance Requirement 4.8.1.1.2.a.3 within 8 hours*, and
 3. Within 2 hours, verify that required systems, subsystems, trains, components and devices that depend on the remaining EDG as source of emergency power are also OPERABLE and in MODE 1, 2, or 3, that the Turbine Driven Emergency Feed Pump is OPERABLE. If these conditions are not satisfied within 2 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 4. Restore one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and
 5. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 Action Statement a. or b., as appropriate, with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A. C. power source.

*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- d. With two of the required offsite A. C. circuits inoperable:
 - 1. Demonstrate the OPERABILITY of the two EDG's by sequentially performing Surveillance Requirement 4.8.1.1.2.a.3 on both within 8 hours, unless the EDG's are already operating, and
 - 2. Restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours.
 - 3. Following restoration of one offsite source, follow Action Statement a. with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable offsite A.C. circuit.

- e. With two of the above required EDG's inoperable:
 - 1. Demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1 within one hour and at least once per 8 hours thereafter, and
 - 2. Restore one of the inoperable EDG's to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 - 3. Following restoration of one EDG, follow Action Statement b. with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable diesel generator.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be determined OPERABLE at least once per 7 days by verifying correct breaker alignment and indication of power availability for each Class 1E bus and its preferred offsite power source.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.8.1.1.2 Each EDG shall be demonstrated OPERABLE:

- a. In accordance with the frequency specified in Table 4.8-1 on a STAGGERED TEST BASIS by:
 1. Verifying the fuel level in the day tank and fuel storage tank.
 2. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
 3. Verifying the diesel generator can start* and accelerate to synchronous speed (504 rpm) with generator voltage and frequency at 7200 ± 720 volts and 60 ± 1.2 Hz.
 4. Verifying the generator is synchronized, gradually loaded* to an indicated 4150-4250 kW** and operates for at least 60 minutes.
- b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by removing accumulated water from the day tank.
- c. At least once per 31 days by checking for and removing accumulated water from the fuel oil storage tanks;
- d. By sampling new fuel oil in accordance with ASTM-D4057 prior to addition to storage tanks and:
 - 1) By verifying in accordance with the tests specified in ASTM-D975-81 prior to addition to the storage tanks that the sample has:
 - a. An API Gravity of within 0.3 degrees at 60°F, or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees;
 - b. A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but not less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;

*This test shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading recommendations.

**This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band shall not invalidate the test.



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

SAFETY-EVALUATION-BY-THE-OFFICE-OF-NUCLEAR-REACTOR-REGULATION

RELATED-TO-AMENDMENT-NO. 98-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 November 26, 1990, South Carolina Electric & Gas Company (the licensee) submitted a request for a change to the Virgil C. Summer Nuclear Station, Unit No. 1 (Summer Station), Technical Specifications (TS). The requested change would remove surveillance requirement (SR) 4.8.1.1.1.b regarding the transfer of Class 1E power supply from its normal to alternate offsite source. In addition, the licensee has proposed editorial changes to TS 3.8.1.1.1 reflecting the deletion of the SR.

2.0 EVALUATION

SR 4.8.1.1.1.b requires the licensee to demonstrate the operability of redundant offsite power sources for the Class 1E buses by switching each bus from its normal to its alternate power supply once every 18 months. This SR is not necessary for the reasons discussed below.

Two separate and physically independent offsite sources provide power to the Class 1E buses at Summer Station. One source, the 230KV transmission line, normally supplies power to bus B through an Engineered Safety Feature (ESF) transformer while the second source, the 115KV line from Parr generating station, provides power to bus A through an emergency auxiliary transformer. Either independent source can be lined up to power both Class 1E buses by manually switching the breakers connecting the buses to the transmission lines.

The two independent power sources are continuously connected to their designated buses. In the event of a loss of one of the offsite power sources, the diesel generator for the affected Class 1E bus will automatically start and, once the bus is isolated, it will supply power to that bus.

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Since there are two independent offsite sources continuously supplying power to their designated buses through their respective transformers; and since in the event of a loss of one of the offsite power sources, the appropriate diesel will supply power to the affected bus, the staff concludes that the ability to connect the safety buses to a single offsite power source is intended as a maintenance feature to allow for servicing of the breakers, not as an operational feature. Since it is not an operational feature, it does not meet the definition of an "alternate" offsite power supply; therefore, the requirement to transfer the onsite Class 1E power supply from its normal to its alternate source is not applicable to Summer Station. The staff has determined, therefore, that the proposal to remove SR 4.8.1.1.b and the editorial changes associated with its removal are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State 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 and changes surveillance requirements. The NRC 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 (56 FR 897). 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: O. Chopra

Date: April 29, 1991