50-395

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

August 13, 1997

Mr. Gary J. Taylor
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: ISSUANCE OF AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. NPF-12 REGARDING MOTOR OPERATED VALVE THERMAL OVERLOAD PROTECTION AND BYPASS DEVICES - VIRGIL C. SUMMER NUCLEAR STATION, UNIT 1 (TAC NO. M94089)

Dear Mr. Taylor:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 137 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 November 14, 1995, as supplemented on July 11, 1996, and July 24, 1997.

The amendment revises Technical Specification (TS) 3/4.8.4.2 for motor operated valves (MOVs) thermal overload protection and bypass devices at Virgil C. Summer Nuclear Station (VCSNS). The proposed TS amendment removes the limiting condition for operation (LCO), the surveillance requirement (SR), and Table 3.8-2 for the above-mentioned MOV devices from the current TS and relocates them to VCSNS plant surveillance test procedures (STPs) as implemented through station administrative procedures (SAPs). This change also removes a discussion of the operability of the MOV devices in the TS Bases Section B 3/4.8.4, along with any references to the MOV devices throughout the TS.

Consistent with your application dated November 14, 1995, as supplemented on July 11, 1996 and July 24, 1997, Additional Condition 2.K. and Appendix C have been added to Facility Operating License No. NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1.

DF01 1/1

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Biweekly Federal Register notice. This completes the staff's efforts on TAC No. M94089.

Sincerely,

Original signed by:

Allen R. Johnson, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosures:
1. Amendment No. 137 to NPF-12
2. Safety Evaluation

cc w/enclosures: See next page

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OFFICE	PM:PDII-1	LA:PDII-1	TSB/C*	EELB*	OGC*
NAME	AJohnson	Dunnington ETP	CGrimes	JCalvo	JHull
DATE	8/11/97	8/13/97	06/04/97	06/12/97	06/17/97
COPY	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
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NAME	GEdison				
DATE	8/13/97				
COPY	Yes/No				

Mr. Gary J. Taylor
South Carolina Electric & Gas Company

VIRGIL C. SUMMER NUCLEAR STATION

cc:

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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. 137
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 14, 1995, as supplemented July 11, 1996 and July 24, 1997, 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 and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 137 , 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.

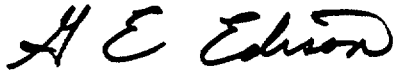
In addition, the license is amended to add paragraph 2.K. to the Facility Operating License No. NPF-12 as follows:

2.K. Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 137, are hereby incorporated into this license. South Carolina Electric & Gas Company shall operate the facility in accordance with the Additional Conditions.

3. This license amendment is effective as of its date of issuance and the change to the facility shall be implemented within 180 days from the date of issuance. Implementation of this amendment shall include the relocation of certain technical specification requirements to the appropriate licensee-controlled documents as described in the Licensee's application dated November 14, 1995, and its supplement dated July 11, 1996 and July 24, 1997, and evaluated in the staff's Safety Evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION



Gordon E. Edison, Acting Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachments:
1. Page 13 to the License and page 1 to Appendix C of the License*
2. Changes to the Technical Specifications

Date of Issuance: August 13, 1997

*Page 13 of the license and page 1 of Appendix C are attached to reflect this change.

2.G. Reporting to the Commission:

2.G.(1) SCE&G shall report any violations of the requirements contained in Section 2, Items C(1), C(3) through (33), E and F of this license within twenty-four (24) hours by telephone and confirm by telegram, mailgram, or facsimile transmission to the NRC Regional Administrator, Region II, or designee, not later than the first working day following the violation, with a written followup report within fourteen (14) working days.

2.G.(2) SCE&G shall notify the Commission, as soon as possible but not later than one hour, of any accident at this facility which could result in an unplanned release of quantities of fission products in excess of allowable limits for normal operation established by the Commission.

2.H. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

2.I. In accordance with the Commission's direction in its Statement of Policy, Licensing and Regulatory Policy and Procedures for Environmental Protection; Uranium Fuel Cycle Impacts, October 29, 1982, this license is subject to the final resolution of the pending litigation involving Table S-3. See, Natural Resources Defense Council v. NRC, No. 74-1586 (April 27, 1982).

2.J. This license is effective as of the date of issuance and shall expire at midnight, August 6, 2022.

2.K. Additional License Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 137, are hereby incorporated into this license. South Carolina Electric & Gas Company shall operate the facility in accordance with the Additional Conditions.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:
1. Appendix A (Technical Specifications)
2. Appendix B (Environmental Protection Plan)
3. Appendix C (Additional Conditions)

Date of Issuance: AUG 6 1982

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. NPF-12

South Carolina Electric & Gas Company (the term licensee in Appendix C refers to South Carolina Electric & Gas Company) shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
137	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated November 14, 1995, as supplemented by letters dated July 11, 1996, and July 24, 1997, and evaluated in the staff's Safety Evaluation attached to this amendment.	The amendment shall be implemented within 180 days from August 13, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. ___

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	Insert Pages
IX	IX
3/4 8-18	3/4 8-18
3/4 8-19	-
3/4 8-20	-
3/4 8-21	-
3/4 8-22	-
B 3/4 8-3	B 3/4 8-3

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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Pages 3/4 8-18, 3/4 8-19, 3/4 8-20, 3/4 8-21, and 3/4 8-22 have been deleted.

BASES

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

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. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 137 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

In its application dated November 14, 1995, as supplemented on July 11, 1996 and July 24, 1997, South Carolina Electric & Gas Company (the licensee) proposed that Technical Specification (TS) 3/4.8.4.2 for motor operated valves (MOVs) thermal overload protection and bypass devices at Virgil C. Summer Nuclear Station (VCSNS) be revised. The proposed TS amendment removes the limiting condition for operation (LCO), the surveillance requirement (SR), and Table 3.8-2 for the above-mentioned MOV devices from the current TS and relocates them to VCSNS licensee-controlled plant surveillance test procedures (STPs), as implemented through station administrative procedures (SAPs). This change also removes a discussion of the operability of the MOV devices in the TS Bases Section B 3/4.8.4, along with any references to the MOV devices throughout the TS.

2.0 BACKGROUND

The function of thermal overload protection devices is to provide low overcurrent protection to the electrical power circuits of their associated equipment during plant operation. However, under accident conditions the thermal overload protection devices are bypassed upon engineered safety feature actuation signals (ESFAS) to preclude any potential for thermal overload protection devices causing nuisance tripping of the associated loads. If severe overcurrent conditions developed (e.g., circuit faults), it would still be cleared by tripping of the upstream circuit breaker.

The purpose of TS 3/4.8.4.2 is to ensure the operability of the MOV devices by demonstrating specific design features that are committed in the final safety analysis report (FSAR), Appendix 3A, to comply with the recommendation of Regulatory Guide (RG) 1.106, "Thermal Overload Protection for Electric Motors on Motor-Operated Valves." The licensee finds that the removal of the above mentioned TS is justified because: (1) the licensee finds this amendment consistent with the efforts of NRC and the nuclear industry to simplify TS, as outlined in the July 22, 1993 (58 FR 39132) Final Policy Statement on TS Improvements for Nuclear Power Reactors (final policy statement). As stated in the final policy statement, if a requirement meets any one of the four criteria, it should be retained or included in the TS. The requirement does

not meet any one of the four criteria in the final policy statement and, therefore, need not be retained or included in TS; and (2) removal does not adversely affect the FSAR commitment to comply with RG 1.106, as its compliance will be maintained and controlled through the licensee-controlled plant procedures and changes will be evaluated by 10 CFR 50.59 review. RG 1.106 describes a method acceptable to the NRC staff in regard to the application of thermal overload protection devices that are integral to the motor starter for electric motors on MOVs. This method would ensure that the thermal overload protection devices will not needlessly prevent the motor from performing its safety-related function.

3.0 EVALUATION

The staff has reviewed the proposed removal of TS 3/4.8.4.2 for the MOV thermal overload protection and bypass devices at Summer and its evaluation follows.

3.1 Removal of LCO 3.8.4.2, SR 4.8.4.2, and Table 3.8-2 from TS 3/4.8.4.2 and its Discussion on the MOV Devices from the Plant TS Bases

The licensee proposes to remove LCO 3.8.4.2, SR 4.8.4.2, and Table 3.8-2, which list MOVs, from TS 3/4.8.4.2 for the MOV thermal overload protection and bypass devices, and to remove its discussion on the MOV devices from the plant TS bases. The removed TS provision and its MOV lists in Table 3.8-2 would be relocated to the licensee-controlled plant procedures, which would continue surveillance. Other than the fact that any changes to those procedures would no longer require a license amendment, the licensee contends that the proposed TS changes do not adversely affect the FSAR commitment to comply with RG 1.106, as its compliance will be maintained and controlled through the licensee-controlled plant procedures and changes will be evaluated by 10 CFR 50.59 review.

In connection with relocating the TS provisions to licensee-controlled documents (e.g., plant operating procedures, the FSAR, and the quality assurance plan), the final rule concerning the Technical Specifications (10 CFR 50.36) was issued in the Federal Register on July 19, 1995. The rule outlines four criteria that must be used for relocating TS to other licensee-controlled documents. However, the licensee's original submittal did not include the evaluation based on those criteria. Upon the staff's request, by supplemental letter dated July 11, 1996, the licensee completed its evaluation and submitted the following information:

Criterion 1 - Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

The licensee finds that those MOV thermal overload protection and bypass devices do not provide any function in the detection of pressure boundary leakage.

Criterion 2 - A process variable, design feature, or operating restriction that is an initial condition of a design basis accident (DBA) or a transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

The licensee finds that those thermal overload protection and bypass devices are not used to define an initial condition of a DBA or a transient analysis that impacts the integrity of fission product barriers.

Criterion 3 - A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or a transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

The licensee finds that those thermal overload protection and bypass devices are automatic functioning devices that are energized only when the associated equipment they protect are energized. These devices serve as subcomponents for the electrical circuits of components that are part of the primary success path and do not directly function or actuate, in and of themselves, to mitigate a DBA or a transient in which a fission product barrier is assumed failed or challenged.

Criterion 4 - A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Operating experience at VCSNS has shown that thermal overloads are highly reliable devices that have a minimal effect on equipment operability, and failure of the bypass device to function will not, by itself, prevent the load from receiving power to operate.

On this basis, the licensee concludes that the thermal overload protection and bypass devices do not constitute components that are significant to the public health and safety.

On the basis of the staff's review of the licensee's response to criteria outlined by the TS final rule, the staff concludes that the proposed amendment to remove LCO 3.8.4.2, SR 4.8.4.2, and Table 3.8-2, which list MOVs, from TS 3/4.8.4.2, and relocate them to the licensee-controlled plant procedures is acceptable. With removal of the SRs to plant STPs, pursuant to 10 CFR 36(c)(3), the staff finds that facility operation will be within the safety limits and LCOs met, and are therefore no longer necessary in the TS. With the deletion of TS 3/4.8.4.2, the staff finds that a discussion of MOV devices is no longer necessary in the TS; therefore, the deletion of a paragraph discussing the operability of MOV devices from the TS bases section is also acceptable.

Additionally, the licensee is meeting RG 1.106 for the MOV devices, as committed to by FSAR, Appendix 3A, and as implemented through the plant's STPs. The STPs address actions corresponding to the LCOs and the SRs of the existing TS. The implementation of STPs is controlled through SAP 139, "Procedure Development, Review, Approval, and Control." Any change to the

procedures is further screened through SAP 107, "10 CFR 50.59 Unreviewed Safety Question Review Process." This review process is directed in SAP 630, "Procedure/Commitment Accountability Program (P/CAP)," to identify any commitments (i.e., TS, FSAR, and RG, etc.) that may adversely affect a procedure.

Consistent with the licensee's submittal dated November 14, 1995, as supplemented on July 11, 1996 and July 24, 1997, License Condition 2.K. and Appendix C have been added to the VCSNS license as discussed above. During a tele-conference on May 12, 1997, between the licensee and NRC, the licensee agreed to the license condition as discussed above.

3.2 Other Administrative Changes on Page IX of the TS Index

With the deletion of TS 3/4.8.4.2, the licensee finds that it is no longer necessary to refer to TS 3/4.8.4.2 on page IX of the TS Index, and a subsequent page should be renumbered accordingly (i.e., from 3/4 8-22 to 3/4 8-23). The staff has reviewed these changes and finds that they involve no changes to the technical content. Therefore, the staff concludes that the proposed changes are acceptable.

4.0 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.

5.0 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 change in the types, of any effluent 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 (60 FR 65684). 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.

6.0 CONCLUSION

On the basis of the staff's review of the licensee's response to criteria outlined by the TS final rule, the staff concludes that the proposed amendment to remove LCO 3.8.4.2, SR 4.8.4.2, and Table 3.8-2, which list MOVs, from TS 3/4.8.4.2, and relocate them to the licensee-controlled plant procedures is acceptable.

Additionally, the proposed TS changes do not adversely affect the FSAR commitment to comply with RG 1.106, as its compliance will be maintained and controlled through the licensee-controlled plant procedures, and changes will be evaluated by 10 CFR 50.59 review. The guidance of RG 1.106 for the MOV devices, are committed to by the FSAR, Appendix 3A, and implemented through the plant's STPs.

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 Contributors: Peter Kang and Ed Tomlinson

Date: August 13, 1997