July 28, 1993

Docket No. 50-395

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. 113 TO FACILITY OPERATING LICENSE NO. NPF-12 REGARDING PRESSURE/TEMPERATURE LIMITS - VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 (TAC NO. M84745)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 113 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 (TS) in response to your application dated October 6, 1992.

The amendment modifies Figures 3.4-2 and 3.4-3 of TS 3/4.4.9, Pressure/Temperature Limits, Reactor Coolant System, it also removes Table 4.4-5, "Reactor Vessel Material Surveillance Program - Withdrawal Schedule," and to remove the reference to this table in Surveillance Requirement 4.4.9.1.2.

The changes to the Pressure/Temperature (P/T) limits provide new heatup and cooldown curves based on the analysis of specimen X of the radiation surveillance program. The request to remove Table 4.4-5 is based on the guidance of Generic Letter 91-01 (GL 91-01), "Removal of the Schedule for Withdrawal of Reactor Vessel Material Specimens from Technical Specifications."

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. 113 to NPF-12
2. Safety Evaluation

cc w/enclosures:
See next page

OFC	LA:PD21:DRPE	PM:PD21:DRPE	SRXB	OGC w/d 7/	AD:PD21:DRPE
NAME	PDAnderson	GFWunder:tmw	RJones	MZobler	SSBajwa
DATE	06/24/93	06/24/93	06/30/93	06/15/93	07/28/93

Document Name: SUM84745.AMD

cc:

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Nuclear Coordinator
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Virgil C. Summer Nuclear Station
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AMENDMENT NO. 113TO FACILITY OPERATING LICENSE NO. NPF-12 - SUMMER, UNIT NO. 1

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290109

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. 113
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 October 6, 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. 113 , 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: July 28, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 113

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
3/4 4-29	3/4 4-29
3/4 4-30	3/4 4-30
3/4 4-31	3/4 4-31
3/4 4-32	3/4 4-32

3/4.4.9 PRESSURE/TEMPERATURE LIMITS

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION

3.4.9.1 The Reactor Coolant System (except the pressurizer) temperature and pressure shall be limited in accordance with the limit lines shown on Figures 3.4-2 and 3.4-3 during heatup, cooldown, criticality, and inservice leak and hydrostatic testing with:

a. A maximum heatup of 100°F in any one hour period,

b. A maximum cooldown of 100°F in any one hour period, and

c. A maximum temperature change of less than or equal to 10°F in any one hour period during inservice hydrostatic and leak testing operations above the heatup and cooldown limit curves.

APPLICABILITY: At all times.

ACTION:

With any of the above limits exceeded, restore the temperature and/or pressure to within the limit within 30 minutes; perform an engineering evaluation to determine the effects of the out-of-limit condition on the fracture toughness properties of the Reactor Coolant System; determine that the Reactor Coolant System remains acceptable for continued operation or be in at least HOT STANDBY within the next 6 hours and reduce the RCS T_{avg} and pressure to less than 200°F and 500 psig, respectively, within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.9.1.1 The Reactor Coolant System temperature and pressure shall be determined to be within the limits at least once per 30 minutes during system heatup, cooldown, and inservice leak and hydrostatic testing operations.

4.4.9.1.2 The reactor vessel material irradiation surveillance specimens shall be removed and examined, to determine changes in material properties, at the intervals required by 10 CFR 50, Appendix H. The results of these examinations shall be used to update Figures 3.4-2 and 3.4-3.

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MATERIAL PROPERTY BASIS

CONTROLLING MATERIAL: LOWER SHELL
INITIAL RT_{NDT}: 10°F
ART AFTER 14 EFPY: 1/4T, 96°F
3/4T, 83°F

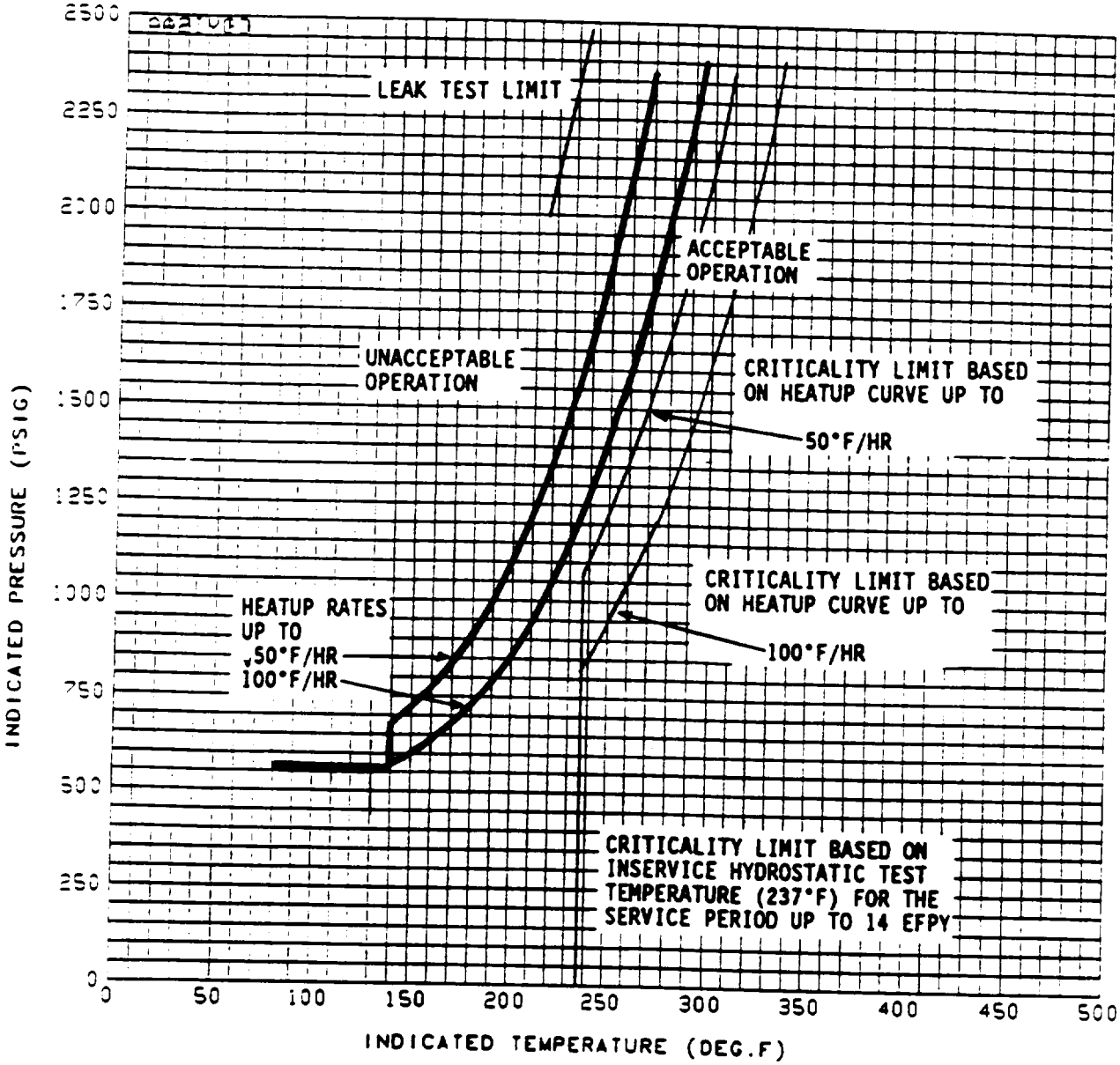

Figure 3.4-2 V. C. Summer Unit 1 Reactor Coolant System Heatup Limitations (Heat up rates up to 50 and 100°F/hr) Applicable for the First 14 EFPY (With Margins 10°F and 60 psig For Instrumentation Errors)

MATERIAL PROPERTY BASIS

CONTROLLING MATERIAL: LOWER SHELL
INITIAL RT_{NDT}: 10°F
ART AFTER 14 EFPY: 1/4T, 96°F
3/4T, 83°F

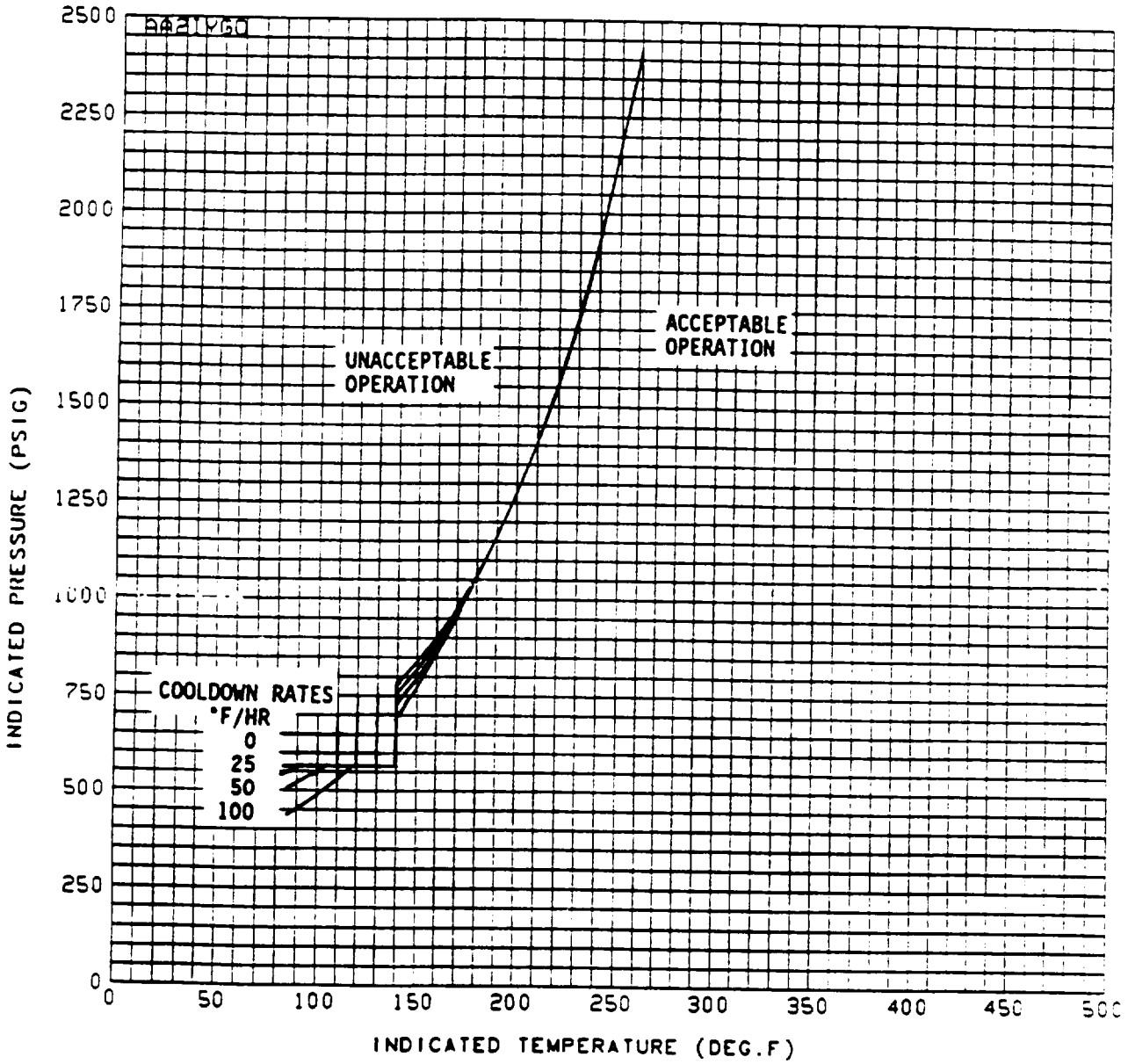

Figure 3.4-3 V. C. Summer Unit 1 Reactor Coolant System Cooldown (Cooldown rates up to 100°F/hr) Limitations Applicable for the First 14 EFPY (With Margins 10°F and 60 psig For Instrumentation Errors)

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 113 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 October 6, 1992, South Carolina Electric & Gas Company (the licensee) submitted a request for changes to the Virgil C. Summer Nuclear Station, Unit No. 1 (Summer Station) Technical Specifications (TS). The proposed changes would modify Figures 3.4-2 and 3.4-3 to TS 3/4.4.9, Pressure/Temperature Limits, Reactor Coolant System, and remove Table 4.4-5, "Reactor Vessel Material Surveillance Program - Withdrawal Schedule," and the reference to this table in Surveillance Requirement 4.4.9.1.2.

The requested changes to the Pressure/Temperature (P/T) limits would provide new heatup and cooldown curves based on the analysis of specimen X of the Summer Station radiation surveillance program. The request to remove Table 4.4-5 is based on the guidance of Generic Letter 91-01 (GL 91-01), "Removal of the Schedule for Withdrawal of Reactor Vessel Material Specimens from Technical Specifications."

2.0 EVALUATION

P/T Limit Curves

Throughout the life of the reactor vessel, material irradiation surveillance specimens are removed and examined to determine changes in material properties. The results of the examination of these specimens may warrant a change to the heatup and cooldown curves (P/T limit curves) associated with the reactor vessel. Strict adherence to proper heatup and cooldown curves is necessary to ensure vessel integrity under normal and transient conditions. In accordance with the TS for Summer Station, surveillance specimen X was removed during refueling outage 5. Analysis of this specimen has indicated that a change to the P/T limit curves is appropriate. In effect, the changes to the curves increase the reference transition temperature by approximately 10°F.

The calculations performed in the development of the proposed P/T curves were made using the guidance of Regulatory Guide 1.99, Revision 2, "Radiation Embrittlement of Reactor Vessel Materials," and Appendix G to 10 CFR Part 50, "Fracture Toughness Requirements." The staff has reviewed the proposed changes and has

determined that they continue to provide conservative limits on the reactor coolant system pressure and temperature in accordance with the requirements of Section V of Appendix G to 10 CFR Part 50. The changes are, therefore, acceptable.

Removal of Schedule

The capsule removal schedule states that during reactor vessel life various material samples will be removed for testing. The capsule removal schedule is controlled by Appendix H to 10 CFR Part 50. The licensee has committed to place the capsule withdrawal schedule in the Final Safety Analysis Report. Removal of this schedule has no impact on plant safety, is in accordance with the guidance of Generic Letter 91-01, and is, therefore, 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 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 the 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 (57 FR 55500). 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: G. Wunder

Date: July 28, 1993