

June 27, 1988

DISTRIBUTION
See attached sheet

Docket No. 50-395

Mr. D. A. Nauman
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
P.O. Box 88
Jenkinsville, South Carolina 29065

Dear Mr. Nauman:

SUBJECT: ISSUANCE OF AMENDMENT NO. 73 TO FACILITY OPERATING LICENSE
NO. NPF-12 - VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1,
REGARDING REACTOR TRIP SYSTEM INSTRUMENTATION (TAC NO. 65779)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 73 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 July 7, 1987.

The amendment changes the Technical Specifications to reflect the appropriate channel calibrations for the source range and intermediate range fission detectors installed as a result of the implementation of the modifications of Regulatory Guide 1.97, Revision 3.

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

Sincerely,

151

John J. Hayes, Jr., Project Manager
Project Directorate II-1
Division of Reactor Projects I/II

Enclosures:

- 1. Amendment No. 73 to NPF-12
- 2. Safety Evaluation

cc w/enclosures:
See next page

880711031B 880627
PDR ADDCK 05000395
P FDR

OFC	:LA:PD21:DRPR:PM:PD21:DRPR:D:PD21:DRPR:	:	:	:
NAME	: PAnderson : JHayes:clh : EAdensan :	:	:	:
DATE	: 6/13/88 : 6/13/88 : 6/13/88 :	:	:	:

Mr. D. A. Nauman
South Carolina Electric & Gas Company

Virgil C. Summer Nuclear Station

cc:

Mr. William A. Williams, Jr.
Technical Assistant - Nuclear Operations
Santee Cooper
P.O. Box 764 (Mail Code 153)
Columbia, South Carolina 29218

J. B. Knotts, Jr., Esq.
Bishop, Cook, Purcell
and Reynolds
1400 L Street, N.W.
Washington, D. C. 20005-3502

Resident Inspector/Summer NPS
c/o U.S. Nuclear Regulatory Commission
Route 1, Box 64
Jenkinsville, South Carolina 29065

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission,
101 Marietta Street, N.W., Suite 3100
Atlanta, Georgia 30323

Chairman, Fairfield County Council
P.O. Box 293
Winnsboro, South Carolina 29180

Attorney General
Box 11549
Columbia, South Carolina 29211

Mr. Heyward G. Shealy, Chief
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

South Carolina Electric & Gas Company
Mr. A. R. Koon, Jr., Manager
Nuclear Licensing
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, South Carolina 29065

AMENDMENT NO. 73 TO FACILITY OPERATING LICENSE NO. NPF-12 - SUMMER, UNIT 1

Docket File

NRC PDR

Local PDR

~~PDI-1 Reading~~

S. Varga (14E4)

G. Lainas

E. Adensam

P. Anderson

J. Hayes

OGC

D. Hagan (MNBB 3302)

E. Jordan (MNBB 3302)

J. Partlow (9A2)

T. Barnhart (4) (P1-137)

W. Jones (P-130A)

E. Butcher (11F23)

M. DeGraff, Region II

P. Moore, Region II

ACRS (10)

GPA/PA

ARM/LFMB

cc: Licensee/Applicant Service List



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. 73
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 licensees), dated July 7, 1987, 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:

8807110326 880627
PDR ADDCK 05000395
P PDR

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 73 , 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 E. Reeves for

Elinor G. Adensam, Director
Project Directorate II-1
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 27, 1988

OFC	:LA:PD21:DRPR:	PM:PD21:DRPR:	OGC	:D:PD21:DRPR:	:	:
NAME	: PAnderson	: JHayes:	c1h	: RBochmann	: EAdensam	:
DATE	: 6/13/88	: 6/9/88	: 6/17/88	: 6/27/88	:	:

ATTACHMENT TO LICENSE AMENDMENT NO. 73

--- 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 identified by amendment number and contain vertical lines indicating the areas of change. Corresponding overleaf pages are also provided to maintain document completeness.

Remove Pages

3/4 3-11

3/4 3-12

3/4 3-14

Insert Pages

3/4 3-11

3/4 3-12 (overleaf)

3/4 3-14

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux High Setpoint	S	D(2, 4), M(3, 4), Q(4, 6), R(4, 5)	M	N.A.	N.A.	1, 2
Low Setpoint	S	R(4)	M	N.A.	N.A.	1###, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4)	M	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4)	M	N.A.	N.A.	1, 2
5. Intermediate Range, Neutron Flux	S	R(4)	S/U(1),M	N.A.	N.A.	1###, 2
6. Source Range, Neutron Flux	S	R(4)	S/U(1),M(9)	N.A.	N.A.	2##, 3, 4, 5
7. Overtemperature ΔT	S	R	M	N.A.	N.A.	1, 2
8. Overpower ΔT	S	R	M	N.A.	N.A.	1, 2
9. Pressurizer Pressure--Low	S	R	M	N.A.	N.A.	1
10. Pressurizer Pressure--High	S	R	M	N.A.	N.A.	1, 2
11. Pressurizer Water Level--High	S	R	M	N.A.	N.A.	1
12. Loss of Flow	S	R	M	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
13. Steam Generator Water Level-- Low-Low	S	R	M	N.A.	N.A.	1, 2
14. Steam Generator Water Level - Low Coincident with Steam/ Feedwater Flow Mismatch	S	R	M	N.A.	N.A.	1, 2
15. Undervoltage - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
16. Underfrequency - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
17. Turbine Trip						
A. Low Fluid Oil Pressure	N.A.	R	N.A.	S/U(1, 10)	N.A.	1
B. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)	N.A.	1
18. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R	N.A.	1, 2
19. Reactor Trip System Interlocks						
A. Intermediate Range Neutron Flux, P-6	N.A.	R(4)	M	N.A.	N.A.	2##
B. Low Power Reactor Trips Block, P-7	N.A.	R(4)	M (8)	N.A.	N.A.	1
C. Power Range Neutron Flux, P-8	N.A.	R(4)	M (8)	N.A.	N.A.	1

TABLE 4.3-1 (Continued)

TABLE NOTATION

- * - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
- ## - Below P-6 (Intermediate Range Neutron Flux Interlock) setpoint.
- ### - Below P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.
- (1) - If not performed in previous 7 days.
- (2) - Comparison of calorimetric to excore power indication above 15% of RATED THERMAL POWER. Adjust excore channel gains consistent with calorimetric power if absolute difference is greater than 2 percent. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (3) - Single point comparison of incore to excore axial flux difference above 15% of RATED THERMAL POWER. Recalibrate if the absolute difference is greater than or equal to 3 percent. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (4) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (5) - Detector plateau curves shall be obtained evaluated and compared to manufacturer's data. For the Power Range Neutron Flux Channels the provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (6) - Incore - Excore Calibration, above 75% of RATED THERMAL POWER. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (7) - Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (8) - With power greater than or equal to the interlock setpoint the required OPERATIONAL TEST shall consist of verifying that the interlock is in the required state by observing the permissive annunciator window.
- (9) - Monthly Surveillance in MODES 3*, 4* and 5* shall also include verification that permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window.
- (10) - Setpoint verification is not required.
- (11) - At least once per 18 months and following maintenance or adjustment of the reactor trip breakers, the TRIP ACTUATING DEVICE OPERATIONAL TEST shall include an independent verification of the undervoltage and shunt trips.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 73 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 July 7, 1987, South Carolina Electric & Gas Company, the licensee, requested a change to the Technical Specification (TS) Section 3/4.3.1, "Reactor Trip System Instrumentation," of the Virgil C. Summer Nuclear Station. The amendment deletes the requirement for the performance of a detector plateau curve for the neutron flux intermediate and source range detectors.

2.0 EVALUATION

This amendment is being requested due to modifications that were made as a result of the implementation of Regulatory Guide 1.97, Revision 3, for post-accident neutron monitoring instrumentation. These modifications, which were addressed in Amendment 65 to the Summer Operating License, replaced the non-post-accident qualified source range BF_3 detectors and intermediate range compensated ion chamber detectors with class 1E, post-accident qualified fission chamber detectors.

The licensee in their July 7, 1987 submittal proposed a change to the TS surveillance requirements of Reactor Trip System Instrumentation of Table 4.3-1 for neutron fluxes. They proposed to modify line items 5 and 6 in Table 4.3-1 of Section 3/4.3.1 and line item 5 of the Table Notation for that same Table. The proposed change would delete notation 5 from line item 5 (intermediate range, neutron flux) and line item 6 (source range, neutron flux). The proposed change would also delete the reference to the intermediate range in line item 5 of the Table Notation.

Line items 5 and 6 refer to detector plateau curves which are to be obtained once per refueling. Detector plateau curves are not applicable to fission chamber detectors. The proposed TS change identifies the appropriate surveillances for the installed instrumentation.

8807110332 880627
PDR ADDCK 05000395
P PDR

On November 13, 1987, the NRC issued a Safety Evaluation (SE) for the licensee's submittal on the implementation of Regulatory Guide (RG) 1.97, Revision 3, guidelines. The conclusion of that SE was that the licensee either conforms to or has acceptable justified deviations from the guidance with the exception of three items of RG 1.97. None of these items involved the source or intermediate range neutron monitoring instrumentation detailed in this SE.

The staff has performed an analysis on the proposed change and verified that all required surveillances are being fulfilled. Since the licensee is improving the quality of the nuclear instrumentation by installing post accident qualified detectors in response to a Regulatory Guide, the staff has concluded that the proposed change is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 Section 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.

4.0 CONCLUSION

The Commission made a proposed determination that this amendment involves no significant hazards consideration, which was published in the Federal Register on August 26, 1987 (52 FR 32211) 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 safety of the public.

Principal Contributors: M. J. DeGraff, Region II
P. B. Moore, Region II

Dated: June 27, 1988