October 23, 1987

Docket No. 50-395

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

Dear Mr. Nauman:

SUBJECT: ISSUANCE OF AMENDMENT NO. 68 TO OPERATING LICENSE NO. NPF-12
VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 (TAC NO. 65007)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 68 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 March 26, 1987.

The amendment revises the radiological environmental monitoring program.

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

Sincerely,

/S/

Jon B. Hopkins, Project Manager
Project Directorate II-1
Division of Reactor Projects I/II

Enclosures:
1. Amendment No. 68 to NPF-12
2. Safety Evaluation

cc w/enclosures:
See next page

LA:PD21:DROR	PM:PD21:DRPR	D:PD21:DRPR
PAnderson	JHopkins/dsf	EAdensam
for 10/5/87	10/5/87	10/6/87

cc:

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AMENDMENT NO. 68 TO FACILITY OPERATING LICENSE NO. NPF-12 - SUMMER, UNIT 1

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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. 68
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 and South Carolina Public Service Authority (the licensees), dated March 26, 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:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 68 , 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/

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 23, 1987

LA:PD21:DRPR	PM:PD21:DRPR	D:PD21:DRPR	OGC-B
PAnderson	JHopkins/dsf	EAdensam	MYoung
8/19/87	8/19/87	8/19/87	8/18/87

MEY w/ noted revision to SE

Done 10/15/87

ATTACHMENT TO LICENSE

AMENDMENT NO. 68 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	Insert Pages
3/4 12-4	3/4 12-4
3/4 12-7	3/4 12-7
3/4 12-9	3/4 12-9

Table 3.12-1 Radiological environmental monitoring program
Virgil C. Summer Nuclear Station

Exposure Pathway and/or Sample		Minimum Number of Sample Locations and Criteria for Selection	Sampling and Collection Frequency	Type and Frequency of Analysis
AIRBORNE				
I. Particulates	A	3 Indicator samples to be taken at locations (in different sectors) beyond but as close to the exclusion boundary as practicable where the highest offsite sectoral ground level concentrations are anticipated.(1)	Continuous sampler operation with weekly collection.	Gross beta following filter change; Quarterly composite (by location) for gamma isotopic.
	B	1 Indicator sample to be taken in the sector beyond but as close to the exclusion boundary as practicable corresponding to the residence having the highest anticipated offsite ground level concentration or dose.(1)		
	C	1 Indicator sample to be taken at the location of one of the dairies most likely to be affected.(1)(2)		

Table 3.12-1 (continued)

Exposure Pathway and/or Sample		Minimum Number of Sample Locations and Criteria for Selection	Sampling and Collection Frequency	Type and Frequency of Analysis
AIRBORNE, (continued)				
	D	1 Control sample to be taken at a location at least 10 air miles from the site and not in the most prevalent wind direction.(1)		
II. Radioiodine	A	3 Indicator samples to be taken at two locations as given in I.A. above.	Continuous sampler operation with weekly cannister collection.	Gamma Isotopic for I-131 weekly.
	B	1 Indicator sample to be taken at the location as given in I.B. above.		
	C	1 Indicator sample to be taken at the location as given in I.C. above.		
	D	1 Control sample to be taken at the location in I.D. above.		

Table 3.12-1 (continued)

Exposure Pathway and/or Sample		Minimum Number of Sample Locations and Criteria for Selection	Sampling and Collection Frequency	Type and Frequency of Analysis
WATERBORNE, (continued)				
	E	1 Indicator sample to be taken in the upper reservoir's non-fluctuating recreational area.	Grab sampling monthly.(3)	As in IV.A above.
	F	1 Control sample to be taken at a location on a separated unaffected watershed reservoir.		
V. Ground Water	A	2 Indicator samples to be taken within the exclusion boundary and in the direction of potentially affected ground water supplies.	Quarterly grab sampling.(5)	Gamma isotopic and tritium analyses quarterly.(5)
	B	1 Control sample from unaffected location.		
VI. Drinking Water	A	1 Indicator sample from nearby public ground water supply.	Monthly grab sampling.(3)	Monthly(3) gamma isotopic and gross Beta analyses and quarterly (5) composite for tritium analyses.
	B	1 Indicator (finished water) sample from the nearest downstream water supply.	Monthly composite sample	
	C	1 Control (finished water) sample from an unaffected water supply.	Monthly composite sample	

Table 3.12-1 (continued)

Exposure Pathway and/or Sample		Minimum Number of Sample Locations and Criteria for Selection	Sampling and Collection Frequency	Type and Frequency of Analysis
INGESTION				
VII. Milk(2)	A	Samples from milking animals in 3 locations within 5 km distant having the highest dose potential. If there are none then, 1 sample from milking animals in each of 3 areas between 5 to 8 km distant where doses are calculated to be greater than 1 mrem per year.[k]	Semi-monthly when animals are on pasture, (6) monthly other times.(3)	Gamma isotopic and I-131 analysis semi-monthly (6) animals are on pasture; monthly (3) at other times.
	B	1 Control sample to be taken at the location of a dairy > 20 miles distant and not in the most prevalent wind direction.(1)		
	C	1 Indicator grass (forage) sample to be taken at one of the locations beyond but as close to the exclusion boundary as practicable where the highest offsite sectoral ground level concentrations are anticipated.(1)	Monthly when available.(3)	Gamma Isotopic.

Table 3.12-1 (continued)

Exposure Pathway and/or Sample		Minimum Number of Sample Locations and Criteria for Selection		Sampling and Collection Frequency	Type and Frequency of Analysis
INGESTION, (continued)					
		D	1 Indicator grass (forage) sample to be taken at the location of VII A above when animals are on pasture.	Monthly when available.(3)	Gamma Isotopic.
		E	1 Control grass (forage) sample to be taken at the location of VII B above.		
VIII.	Food Products	A	2 Samples of broad leaf vegetation grown in 2 nearest offsite locations of highest calculated annual average ground-level D/Q if milk sampling is not performed within 3 km or if milk sampling is not performed at a location within 5 to 10 km where the doses are calculated to be greater than 1 mrem/yr.[k]	Monthly when available	Gamma isotopic analysis on edible portion.
		B	1 Control sample for the same foods taken at a location at least 10 miles distant and not in the most prevalent wind direction if		

Table 3.12-1 (continued)

Exposure Pathway and/or Sample		Minimum Number of Sample Locations and Criteria for Selection	Sampling and Collection Frequency	Type and Frequency of Analysis
INGESTION, (continued)				
	B	(Cont'd) milk sampling is not performed within 3 km or if milk sampling is not at a location within 5 to 8 km where the doses are calculated to be greater than 1 mrem/yr.[k]		
IX. Fish	A	1 Indicator sample to be taken at a location in the upper reservoir.	Semi-annual(7) collection of the following specie types if available: bass, brea, crappie; catfish, carp; forage fish (shad).	Gamma isotopic on edible portions semi-annually.
	B	1 Indicator sample to be taken at a location in the lower reservoir		
	C	1 Indicator sample to be taken at a location in the upper reservoir's nonfluctuating recreational area.		
	D	1 Control sample to be taken at a location on the receiving river, sufficiently far upstream such that no effects of pumped storage operation are anticipated.		

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 68 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 March 26, 1987, South Carolina Electric & Gas Company (SCE&G) submitted a request for changes to the Virgil C. Summer Nuclear Station, Unit No. 1, Technical Specifications.

The amendment revises Technical Specification Table 3.12-1, "Radiological Environmental Monitoring Program, Virgil C. Summer Nuclear Station." The proposed changes would: (1) reduce the number of control stations for monitoring radioiodines and particulates in air; (2) add a control station for monitoring drinking water; and (3) reduce the number of indicator locations for monitoring radionuclides in food products.

2.0 EVALUATION

The Technical Specifications currently require, among other things, that SCE&G monitor radionuclides in air, drinking water, and food products. The required radiological environmental monitoring program provides representative measurements of radiation and of radioactive materials in those exposure pathways and for those radionuclides that lead to the highest potential radiation exposures of members of the public resulting from plant operation. This monitoring program implements Section IV.B.2 of Appendix I to 10 CFR Part 50, and thereby supplements the radiological effluent monitoring program by verifying that the measurable concentrations of radioactive materials and levels of radiation are not higher than expected on the basis of the effluent measurements and the modeling of the environmental exposure pathways. Generic guidance for this monitoring program is provided by the Radiological Assessment Branch Technical Position on Environmental Monitoring.

Currently, SCE&G is required to monitor radioiodines and particulates in the air at five indicator locations and two control locations. SCE&G proposes to reduce the number of required control locations from 2 to 1. A review of baseline and operational data indicates that the elimination

of one control location will not adversely impact the ability to discern station operational effects from macro-regional effects. Since the Branch Technical Position recommends monitoring of radioiodines and particulates at one or more control locations, this change is acceptable.

With regard to monitoring radionuclides in water, SCE&G is currently required to monitor surface water, ground water, and drinking water. Although there are indicator and control samples taken for surface water and ground water, only an indicator sample is taken for monitoring drinking water. The nearest indicator location for monitoring public drinking water is located at the Columbia Water Works which is about 25 miles downstream of the plant's liquid effluent discharge point (Ref. 1). SCE&G proposes to add a control location for monitoring drinking water. This change is acceptable.

With regard to monitoring radionuclides in vegetation, Summer's Technical Specifications currently require that 3 broadleaf samples be taken from 3 indicator locations where the highest concentrations of radionuclides are expected. SCE&G proposes to reduce the number of indicator locations from three to two. The present food products requirement is compensatory in nature due to the lack of dairy within five miles. The two remaining indicator locations have consistently remained the highest relative deposition locations and have better potential for determining any offsite exposures as indicated by the annual land use census and meteorological monitoring activities conducted since 1978. Therefore, this change is acceptable.

The staff has reviewed the proposed changes to Technical Specifications for the Virgil C. Summer Nuclear Station, and finds that the proposed changes meet the applicable regulatory guidance and requirements and are, therefore, acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change 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 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 July 29, 1987 (52 FR 28387) and consulted with the State of South Carolina. No public comments or requests for hearing 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.

Reference

1. "Radiological Environmental Monitoring Report, Virgil C. Summer Nuclear Station, For The Operating Period January 1, 1986 - December 31, 1986," South Carolina Electric and Gas Company, April 1987.

Principal Contributors:

E. F. Branagan, Jr., Radiation Protection Branch
J. B. Hopkins, Project Directorate II-1

Dated: October 23, 1987

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 68 TO FACILITY OPERATING LICENSE NO. NPF-12

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