

Docket No. 50-395

January 5, 1984

CP1

Mr. O. W. Dixon, Jr.
Vice President Nuclear Operations
South Carolina Electric & Gas Company
P.O. Box 764
Columbia, South Carolina 29218

Dear Mr. Dixon:

Subject: Issuance of Amendment No. 20 to Facility Operating License NPF-12 Virgil C. Summer Nuclear Station, Unit No. 1

The Nuclear Regulatory Commission has issued Amendment No. 20 to Facility Operating License NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1 located in Fairfield County, South Carolina. This amendment is in response to your letter dated July 22, 1983.

The amendment changes the Technical Specifications to add requirements for Condensate Demineralizer Backwash Effluent Line monitoring and to provide operational and surveillance requirements for the associated effluent sampling and monitoring. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No. 20 to Facility Operating License NPF-12 is enclosed.

Sincerely,

EA
Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosures:

- 1. Amendment No. 20
- 2. Safety Evaluation

cc w/enclosure:
See next page

MD
LA:DL:LB #4
MDuncan/hmc
12/15/83

JH
DL:LB #4
JHopkins
12/15/83

EA
DL:LB #4
EAdensam
12/15/83

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SUMMER

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U.S. Environmental Protection Agency
Region IV
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Atlanta, Georgia 30308

January 5, 1984

AMENDMENT TO FACILITY OPERATING LICENSE NO. NPF-12 - Virgil C. Summer Unit 1

DISTRIBUTION w/enclosures:

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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. 20
License No. NPF-12

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Virgil C. Summer Nuclear Station, Unit No. 1 (the facility) Facility Operating License No. NPF-12 filed by the South Carolina Electric & Gas Company acting for itself and South Carolina Public Service Authority (the licensees), dated July 22, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the 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 set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this license 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 hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and paragraph 2.C(2) of Facility Operating License No. NPF-12 is hereby amended to read as follows:

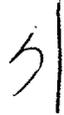
(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 20 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.

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3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosure:
Technical Specification Changes

Date of Issuance: January 5, 1984

LA:DL/LB #4
MDuncan/hmc
12/15/83

DL:LB #4
JHopkins
12/15/83

OELD
MYoung
12/22/83

DL:LB #4
EAdensam
12/15/83

AD:L:DL
TNovak
12/14/83

ATTACHMENT TO LICENSE AMENDMENT NO. 20

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 area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Amended
Page

3/4 3-68
3/4 3-70
3/4 3-71
3/4 3-72

Overleaf
Page

3/4 3-67
3/4 3-69

INSTRUMENTATION

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the OFFSITE DOSE CALCULATION MANUAL (ODCM).

APPLICABILITY: At all times.

ACTION:

- a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, immediately suspend the release of radioactive liquid effluents monitored by the affected channel or declare the channel inoperable.
- b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-12. Additionally if this condition prevails for more than 30 days, in the next semiannual effluent report, explain why this condition was not corrected in a timely manner.
- c. The provisions of Specifications 6.9.1.12.b, 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8.1 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and ANALOG CHANNEL OPERATIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE		
a. Liquid Radwaste Effluent Line - RM-L5 or RM L9	1	31
b. Nuclear (Processed Steam Generator) Blowdown Effluent Line RM-L7 or RM-L9	1	31
c. Steam Generator Blowdown Effluent Line		
1. Unprocessed during Power Operation - RM-L10 or RM-L3	1	32
2. Unprocessed during Startup - RM-L3	1	32
d. Turbine Building Sump Effluent Line - RM-L8	1	33
e. Condensate Demineralizer Backwash Effluent Line RM-L11	1	36
2. FLOW RATE MEASUREMENT DEVICES*		
a. Liquid Radwaste Effluent Line - Tanks 1 and 2	1/tank	34
b. Penstocks Minimum Flow Interlock**	1	34
c. Nuclear Blowdown Effluent Line	1	34
d. Steam Generator (Unprocessed) Blowdown Effluent Line	1	34
3. TANK LEVEL INDICATING DEVICES		
a. Condensate Storage Tank	1	35

*Flow rate for the monitor RM-L9 is determined by adding flow rates for monitors RM-L5 and RM-L7.

**Minimum dilution flow is assured by an interlock terminating liquid waste releases if minimum dilution flow is not available.

INSTRUMENTATION

TABLE 3.3-12 (Continued)

TABLE NOTATION

- ACTION 31 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases may continue for up to 14 days provided that prior to initiating a release:
- a. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.3, and
 - b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge line valving;
- Otherwise, suspend release of radioactive effluents via this pathway.
- ACTION 32 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are analyzed for gross radioactivity (beta and gamma) at a limit of detection of at least 10^{-7} microcuries/gram:
- a. At least once per 8 hours when the specific activity of the secondary coolant is greater than 0.01 microcuries/gram DOSE EQUIVALENT I-131.
 - b. At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microcuries/gram DOSE EQUIVALENT I-131.
- ACTION 33 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided that, at least once per 8 hours, grab samples are collected and analyzed for gross radioactivity (beta and gamma) at a limit of detection of at least 10^{-7} microcuries/gram.
- ACTION 34 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases. Pump curves may be used to estimate flow.

INSTRUMENTATION

TABLE 3.3-12 (Continued)

TABLE NOTATION

- ACTION 35 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, liquid additions to this tank may continue for up to 30 days provided the tank liquid level is estimated during all liquid additions to the tank to prevent overflow.
- ACTION 36 With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, effluent releases may continue for up to 30 days provided that samples are analyzed in accordance with specification 4.11.1.1.1 and 4.11.1.5.

TABLE 4.3-8

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>
1. GROSS BETA OR GAMMA RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE				
a. Liquid Radwaste Effluent Line - RM-L5, RM-L9	D	P	R(3)	Q(1)
b. Nuclear Blowdown Effluent Line - RM-L7	D	P	R(3)	Q(1)
c. Steam Generator Blowdown Effluent Line - RM-L3, RM-L10	D	M	R(3)	Q(1)
d. Turbine Building Sump Effluent Line - RM-L8	D	M	R(3)	Q(1)
e. Condensate Demineralizer Backwash Line RM-L11	D	M	R(3)	Q(5)
2. FLOW RATE MEASUREMENT DEVICES				
a. Liquid Radwaste Effluent Line	D(4)	N.A.	R	Q
b. Penstocks Minimum Flow Interlock	D(4)	N.A.	R	Q
c. Nuclear Blowdown Effluent Line	D(4)	N.A.	R	Q
d. Steam Generator Blowdown Effluent Line	D(4)	N.A.	R	Q
3. TANK LEVEL INDICATING DEVICES				
a. Condensate Storage Tanks	D	N.A.	R	Q

INSTRUMENTATION

TABLE 4.3-8 (Continued)

TABLE NOTATION

- (1) The ANALOG CHANNEL OPERATIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Loss of Power (alarm only).
 3. Instrument indicates a downscale failure (alarm only).
 4. Instrument controls not set in operate mode.
- (2) The ANALOG CHANNEL OPERATIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 2. Loss of Power.
 3. Instrument indicates a downscale failure.
 4. Instrument controls not set in operate mode.
- (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.
- (4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.
- (5) The ANALOG CHANNEL OPERATIONAL TEST shall also demonstrate that automatic isolation of this pathway and local panel alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Loss of Power (alarm only).
 3. Instrument indicates a downscale failure (alarm only).
 4. Instrument controls not set in operate mode.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 20 TO FACILITY OPERATING LICENSE NPF-12

SOUTH CAROLINA ELECTRIC & GAS COMPANY

SOUTH CAROLINA PUBLIC SERVICE AUTHORITY

I. INTRODUCTION

By letter dated July 22, 1983, South Carolina Electric & Gas Company (the licensee) requested changes in the Technical Specifications pertaining to the Condensate Demineralizer Backwash Effluent Line (CDBEL) and the Processed Steam Generator Blowdown Effluent Line (PSGBEL). The licensee's proposal will result in the addition of requirements for CDBEL monitoring to the Technical Specifications and provide operational and surveillance requirements for the associated effluent sampling and monitoring; it will also change the existing Technical Specification ACTION statement for the PSGBEL.

II. DISCUSSION AND EVALUATION

Currently, there is no Technical Specification pertaining to the CDBEL; instead there is License Condition 2.C(21) in this regard which requires the licensee to install and calibrate the CDBEL monitor, RM-L11, prior to startup after the first refueling outage. In addition, the existing Technical Specification ACTION statement for the PSGBEL (a batch release) erroneously implies that the release is continuous.

By letter dated July 22, 1983, the licensee informed us that the task stipulated in the License Condition 2.C(21) has been completed, i.e., the effluent monitor RM-L11 has been installed and calibrated and consequently requested us to revise the Technical Specifications to reflect the changed situation. The licensee proposed to add the CDBEL to the Technical Specifications and provided the appropriate operational and surveillance Technical Specification requirements for the associated effluent sampling and monitoring. Also, the licensee requested that the existing Technical Specification ACTION statement pertaining to the PSGBEL be changed into an ACTION statement appropriate for batch releases.

We have reviewed the current Technical Specifications, as well as the proposed changes by the licensee. Justifications for the proposed changes were provided by the licensee in the above mentioned letter. Based on our review, we have concluded that the proposed changes to the Technical Specifications are acceptable for the following reasons:

1. The addition of the CDBEL to the existing Technical Specifications for liquid effluent lines is a logical consequence

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of the licensee's completion of the requirement stipulated in License Condition 2.C(21) for the continued operation beyond the first refueling outage, and will enhance the monitoring and sampling capability of this potentially radioactive effluent release pathway.

2. The addition of the CDBEL to the Technical Specification will not result in either a change in effluent types or the total amount of radioactivity estimated to be released to the environment previously by us.
3. The operational and surveillance requirements for sampling and monitoring of the associated CDBEL provided by the licensee are appropriate.
4. The proposed revision to the Technical Specification ACTION statement for the PSGBEL (batch release) is appropriate for batch releases.

III. ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

IV. CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (48 FR 49596) on October 26, 1983, 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 health and safety of the public.

Principal Contributors: Jon B. Hopkins, Licensing Branch No. 4, DL
Thyagaraja Chandrasekaran, Meteorology & Effluent
Treatment Branch, DSI

Dated: January 5, 1984

Amendment 20

INITIAL
NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION
AND NOTICING ACTION

Docket No. 50-395 Facility: Virgil C. Summer

Licensee: South Carolina Electric & Gas Date of application: July 22, 1983

Request for: Addition of condensate demineralizer backwash effluent monitor RM-L11 to Technical Specifications and changing of the Technical Specification Action Statement for less than the minimum channels operable of the Nuclear (Processed Steam Generator) ~~χ~~ Blowdown Effluent Line Monitors RM-L7 or RM-L9.

(See attached notice or press release for more details.)

Initial Determination:

- Proposed determination - amendment request involves no significant hazards considerations (NSHC).
- Final determination - amendment request involves significant hazards considerations (SHC).

Basis for Determination

- Licensee's NSHC discussion has been reviewed and is accepted. See attached amendment request.
- Basis for this determination is presented in the attached notice.
- Other (state): The amendment would add a radioactive liquid effluent monitoring instrument, required by a license condition, to Technical Specifications. The amendment also changes the action statement for the nuclear (processed steam generator) blowdown effluent line to reflect ~~both~~ release monitoring requirements instead of continuous release monitoring requirements. *batch*

The Commission has provided certain examples (48 FR 14870) of actions likely to involve no significant hazards considerations. One of the examples relates to a change that constitutes an additional limitation, restriction, or control not presently included in the Technical Specifications. The amendment involved here is similar in that it adds an additional requirement to Technical Specifications and it changes a monitoring requirement to the more correct control. Accordingly, the Commission proposes to determine that this change does not involve a significant hazards consideration. (Attach additional sheets as needed.)

Initial Noticing Action: (Attach appropriate notice or input for monthly FRN)

1. Monthly FRN. Notice of opportunity for hearing (30 days) and request for comments on proposed NSHC determination - monthly FRN input is *not* attached (Attachment 8).
2. Individual FRN (30 days). Same notice matter as above. Time does not allow waiting for next monthly FRN (Attachments 9a and 9b).

(THIS FORM SHOULD BE TYPED EXCEPT FOR UNUSUAL, URGENT CIRCUMSTANCES.)

- 3. () Local media notice. Valid exigent circumstances exist (evaluated below). Local media notice requesting public comments on proposed NSHC determination is attached (Attachment 10).
- 4. () No notice. A valid emergency situation exists (evaluated below) and there is no time for public notice on proposed NSHC determination. (No attachment.)
- 5. () Individual FRN (30-days). Licensee's claim of exigent or emergency circumstances is invalid (evaluated below). Notice of opportunity for hearing (30 days) and request for comments on proposed NSHC determination is attached (Attachments 9a and 9b). Letter of explanation to licensee is also attached.
- 6. () Individual FRN (30-days). The amendment request involves SHC. Notice of opportunity for prior hearing is attached (Attachment 5). Letter to licensee also attached.
- 7. () Individual Short FRN. Valid emergency circumstances exist (evaluated below). There is no time for the usual 30-day FRN. (Attachment 16).

Evaluation of exigent or emergency circumstances (if applicable):

(attach additional sheets as needed)

Approvals:

Date:

- 1. Jon B Hopkins
(Project Manager)
- 2. Clara S. Adensam
(Branch Chief)
- 3. _____
(Assistant Director)
- 4. [Signature]
(OELD)

9/14/83
SEP 14 1983
9-20-83

Additional approval (for noticing action types 4 and 5):

- 5. _____
(Director, Division of Licensing)

Attachment: as indicated.

cc: Original - Docket File (with note "Docket File only")

PM
LA