

September 5, 1995

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. 126 TO FACILITY OPERATING LICENSE NO. NPF-12 REGARDING CONTAINMENT LEAKAGE TESTING - VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 (TAC NO. M92611)

Dear Mr. Taylor:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 126 to Facility Operating License No. NPF-12 for the Virgil C. Summer Nuclear Station, Unit No. 1. The amendment changes the Technical Specifications in response to your application dated June 19, 1995.

The amendments restructure the primary containment and primary containment leakage technical specifications to reduce the repetition of those requirements contained in NRC regulations such as Appendix J to 10 CFR Part 50.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Bi-weekly Federal Register notice. This completes the staff's efforts on TAC No. M92611.

Sincerely,

Original signed by
Stephen Dembek, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosures: 1. Amendment No. 126 to NPF-12
2. Safety Evaluation

cc w/enclosures: See next page

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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. 126
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 June 19, 1995, 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. 126, 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



Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: September 5, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 126

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 revisions are indicated by marginal lines.

Remove Pages

3/4 6-2
3/4 6-3
B3/4 6-1

Insert Pages

3/4 6-2
3/4 6-3
B3/4 6-1

CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2. Containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of:
 1. Less than or equal to L_a , 0.20 percent by weight of the containment air per 24 hours at P_a , 53.5 psig, or
 2. Less than or equal to L_t , 0.10 percent by weight of the containment air per 24 hours at a reduced pressure of P_t , 26.8 psig.
- b. A combined leakage rate of less than $0.60 L_a$ for all penetrations and valves subject to Type B and C tests, when pressurized to P_a .

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75 L_a$ or $0.75 L_t$, as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60 L_a$, restore the overall integrated leakage rate to less than or equal to $0.75 L_a$ or less than or equal to $0.75 L_t$, as applicable, and the combined leakage rate for all penetrations subject to Type B and C tests to less than $0.60 L_a$ prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50:

- a. Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at either P_a (53.5 psig) or at P_t (26.8 psig) during each 10-year service period in accordance with 10 CFR 50, Appendix J.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (continued)

- b. Deleted.
- c. The accuracy of each Type A test shall be verified by a supplemental test in accordance with Appendix J.
- d. Type B and C tests shall be conducted with gas at P_a (53.5psig) in accordance with Appendix J except for tests involving:
 - 1. Air locks.
 - 2. Purge supply and exhaust isolation valves with resilient material seals.
- e. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.7.3.
- f. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- g. The provisions of Specification 4.0.2 are not applicable.

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates (including those used in demonstrating a 30 day water seal) ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ or $0.75 L_t$, as applicable, during performance of the periodic test to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates are consistent with the requirements of Appendix "J" of 10 CFR 50.

3/4.6.1.3 REACTOR BUILDING AIR LOCKS

The limitations on closure and leak rate for the reactor building air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provide assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 126 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 June 19, 1995, the South Carolina Electric & Gas Company (the licensee) requested changes to the Technical Specifications (TS) for the Virgil C. Summer Nuclear Station, Unit 1 (VCSNS). The proposed amendments would remove the specific scheduling requirements for Types A, B, and C containment leakage rate tests from the TS and replace them with requirements to perform Types A, B, and C testing in accordance with Appendix J to 10 CFR Part 50 (Appendix J). Additional editorial changes were also proposed.

2.0 EVALUATION

TS 4.6.1.2 currently requires that the licensee use the criteria of Appendix J using the methods and provisions of ANSI N45.4-1972 to demonstrate acceptable containment leakage rates for Type A, B, and C testing. The licensee is proposing to eliminate the reference to ANSI N45.4-1972 and instead rely solely on reference to Appendix J. This will preclude the need to revise the TS if the standard referenced in Appendix J is changed. The licensee's TS change request is consistent with the staff's guidance in "Standard Technical Specifications, Westinghouse Plants," (NUREG-1431, Rev. 1) and is therefore acceptable.

TS 4.6.1.2.a currently requires that a set of three Type A (Overall Integrated Containment Leakage Rate) tests be performed at 40 ± 10 month intervals during each 10-year service period, with the third test of each set performed during the shutdown for the 10-year plant inservice inspection. Section III.D. of Appendix J requires that Type A tests of the containment be scheduled as a set of three tests, to be performed at approximately equal intervals, during each 10-year service period, with the third set to coincide with the shutdown for the 10-year plant inservice inspection. For units, such as VCSNS, on 18-month fuel cycles the 40 ± 10 month requirement essentially requires performance of a test every two fuel cycles as three cycles would be 54 months which exceeds the allowance. Since a test is required every two cycles over a 10-year period, this necessitates either the performance of a fourth test or the request for a period extension between two of the tests. Due to this

ENCLOSURE 2

scheduling difficulty the licensee has proposed to revise the TS requirement for Type A tests to simply reference the requirements of Appendix J. This will allow the licensee to divide the ten year interval into three approximately equal periods (i.e., 4.5 years, 3 years and 3 years) without a future TS amendment. The proposed changes do not impact the design basis of the containment and would not change the response of containment during a design basis accident. Also, the testing method, acceptance criteria, and the Bases are not changed by the proposed revisions to this TS. Therefore, based on all of the above, the staff finds the revision to TS 4.6.1.2.a to be acceptable.

TS 4.6.1.2.b, 4.6.1.2.c.1, and 4.6.1.2.c.2 contain additional testing requirements regarding the schedule for retesting if a test fails to meet the $0.75 L_a$ or $0.75 L_t$ requirement and supplemental testing to verify accuracy of Type A tests. These testing requirements in the TS and in Appendix J are virtually identical except for minor grammatical differences. The licensee has proposed to delete these TS for simplicity. Since the regulatory and TS requirements are essentially identical, the proposed deletion is acceptable.

TS 4.6.1.2.c.3 provides specific testing direction regarding the quantity of gas to be displaced during a supplemental Type A test. The licensee stated that these Type A test requirements are encompassed by Appendix J, Section III.A.3.b and need not be reiterated in the TS. However, while 4.6.1.2.c.3 mandates a specific quantity of gas to be displaced from containment during a supplemental test, Appendix J refers to Appendix C of ANSI N45.4-1972 for guidance on an acceptable supplemental test. Although the requirements are not specified in the same level of detail in Appendix J as in the current TS, the requirement for a supplemental test and general requirements for the accuracy of the test are specified in Appendix J. In addition, it is not necessary for the TS to contain the level of detail currently specified in TS 4.6.1.2.c.3. For example, NUREG-1431, Rev. 1, is consistent with the licensee's proposal in this respect. Based on the above, the staff finds the deletion of TS 4.6.1.2.c.3 acceptable.

The licensee has also proposed that TS 4.6.1.2.d, which specifies requirements for pressure and intervals for Type B and C tests, be replaced with a requirement that Type B and C testing be conducted in accordance with Appendix J. Since the requirements for Type B and C testing are specified in greater detail in Appendix J, the deletion from the TS has no impact on the requirement imposed on the licensee and is, therefore, acceptable.

Finally, the licensee has proposed to delete a footnote that referred to a previous one time extension of the third Type A test. Since this footnote is no longer applicable, its deletion is an acceptable clarification of the TS and the associated Bases.

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 amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 37099). Accordingly, the amendments meet 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 amendments.

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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Dembek

Date: September 5, 1995

September 5, 1995

Mr. Gary J. Taylor
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