

March 21, 2005

Mr. Jeffery Archie
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 - ISSUANCE OF
AMENDMENT RE: ADOPTION OF TECHNICAL SPECIFICATION TASK
FORCE TRAVELER - 287, REVISION 5, VENTILATION SYSTEM ENVELOPE
ALLOWED OUTAGE TIME (TAC NO. MC6341)

Dear Mr. Archie:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 171 to Renewed Facility Operating License No. NPF-12 for the Virgil C. Summer Nuclear Station (VCSNS), Unit No. 1. The amendment changes the Technical Specifications (TSs) in response to your application dated March 9, 2005.

This amendment revises TS 3/4.7.6, "Control Room Normal and Emergency Air Handling System" and associated Bases. Specifically, VCSNS proposes to revise TS 3/4.7.6 to provide an Action when the Control Room Normal and Emergency Air Handling System ventilation boundary is inoperable, and a note that allows the ventilation boundary to be open, intermittently, under administrative controls. The change is consistent with the TS Task Force Traveler No. 287, Revision 5, "Ventilation System Envelope Allowed Outage Time," which was approved by the Commission on March 16, 2000.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Biweekly *Federal Register* notice.

Sincerely,

/RA/

Karen R. Cotton, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosures: 1. Amendment No. 171 to NPF-12
2. Safety Evaluation

cc w/enclosures: See next page

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NRR-058

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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 RENEWED FACILITY OPERATING LICENSE

Amendment No. 171

Renewed 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 March 9, 2005, 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 Renewed 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. 171, 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

/RA/

John A. Nakoski, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: March 21, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 171
TO RENEWED FACILITY OPERATING LICENSE NO. NPF-12
DOCKET NO. 50-395

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

3/4 7-14
B 3/4 7-4
B 3/4 7-5

Insert Pages

3/4 7-14
B 3/4 7-4
B 3/4 7-5

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 171 TO

RENEWED 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 application dated March 9, 2005, South Carolina Electric & Gas Company (SCE&G, the licensee) requested changes to the Technical Specifications (TSs) for the Virgil C. Summer Nuclear Station (VCSNS). The proposed changes would revise TS 3/4.7.6, "Control Room Normal and Emergency Air Handling System" and associated Bases. VCSNS proposes to revise TS 3/4.7.6 to provide an Action when the Control Room Normal and Emergency Air Handling System ventilation boundary is inoperable and add a note that allows the ventilation boundary to be open, intermittently, under administrative controls. The change is consistent with the TS Task Force (TSTF) Traveler No. 287, Revision 5, "Ventilation System Envelope Allowed Outage Time," which was approved by the Commission on March 16, 2000.

2.0 REGULATORY EVALUATION

The proposed amendment would revise Limiting Condition for Operation (LCO) 3.7.6 and the associated TS Bases to provide specific conditions, required actions, and completion times that address a degraded control room boundary. The staff finds that the licensee, in Section 5.0 of its submittal, identified the applicable regulatory requirements. The regulatory requirements and guidance which provide the basis for the staff's review criteria are:

- Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR 50), Appendix A, General Design Criterion (GDC) 19; and 10 CFR Sections 50.36, 50.90, and 50.92
- TSTF Traveler No. 287, Revision 5 (TSTF-287)
- NUREG-1431, Revision 3, "Standard Technical Specifications Westinghouse Plants Specifications," dated June 2004; specifically Standard Technical Specification (STS) 3.7.10, Control Room Emergency Filtration System, and associated Bases.

Precedents associated with the licensee's amendment application include TSTF-287 and previously issued amendments approved by the NRC for a number of pressurized-water reactors (PWRs) and several boiling-water reactors (BWRs), including Hatch, Fermi, Susquehanna, Browns Ferry and Columbia Generating Station.

3.0 TECHNICAL EVALUATION

The Control Room Normal and Emergency Air Handling System provides a radiologically controlled environment from which the unit can be safely operated following a design basis accident (DBA). The safety-related function of the Control Room Normal and Emergency Air Handling System includes two 100-percent capacity redundant fan and filter systems for emergency treatment of outside supply air. The current Surveillance Requirement (SR) 4.7.6 ensures that the control room boundary will meet its positive pressure limit with one Control Room Normal and Emergency Air Handling system in operation. The current LCO 3.7.6 provides specific conditions, required actions, and completion times for Control Room Normal and Emergency Air Handling System inoperability due to degradation. However, it does not provide corresponding conditions, required actions, or completion times associated with the control room boundary degradation. Therefore, if the pressure boundary surveillance (i.e., SR 4.7.6.) is not met while in Modes 1, 2, 3, or 4 then LCO 3.0.3 must be entered. Requiring the plant to enter LCO 3.0.3 when the control room boundary is not intact does not provide sufficient time to effect required repairs or corrective maintenance activities.

The staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment. The proposed changes are similar in nature to the improved Standard TSs for pressurized water reactor shield building and boiling water reactor secondary containment, which allow 24 hours to restore secondary containment or shield building envelope to operable status before requiring an orderly shutdown from operating conditions. The staff's evaluation is provided below.

The proposed changes to TS 3/4.7.6 are:

1. A Note is added to LCO 3.7.6 for the Control Room Normal and Emergency Air Handling System to allow the main control room boundary to be opened intermittently under administrative controls. The licensee revised the associated TS Bases to make them consistent with the intent of 10 CFR Part 50 Appendix A, GDC 19 and the NUREG 1431 TS revision.
2. A new Condition/Action a.2 is added to LCO 3.7.6 to specify that 24 hours are allowed to restore an inoperable main control room boundary to operable status. The licensee revised the associated TS Bases to make them consistent with the TS revision. The revised Bases include a description of the preplanned compensatory measures to be taken during the time period that the main control room boundary is inoperable.
3. Condition/Action b.2 of LCO 3.7.6 for two inoperable Control Room Normal and Emergency Air Handling systems in Modes 1, 2, 3, or 4 is modified to enter LCO 3.0.3 immediately when the two Control Room Normal and Emergency Air Handling systems are inoperable for reasons other than the degraded main control room boundary, as stated in Condition/Action a.2 above. The associated TS Bases for this Condition are revised accordingly.

For entry and exit through doors, the administrative control of the doors is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the main control room. This individual will have a method to rapidly close the opening when a need for control room area isolation is indicated.

In summary, the proposed changes would allow 24 hours (during operation in Modes 1, 2, 3 and 4) to restore the leak tightness of the control room boundary before requiring the unit to perform an orderly shutdown, and also would allow intermittent openings of the control room boundary under administrative controls. The 24-hour completion time is consistent with the intent of GDC 19 and STS 3.7.10, Control Room Emergency Filtration System, as discussed in NUREG-1431, and is reasonable based on the low probability of a DBA event occurring during this time period. Appropriate compensatory measures will be utilized to protect the control room operators from potential hazards such as radiation, radioactive contamination, toxic chemicals, smoke, temperature, relative humidity, and to ensure physical security. The preplanned compensatory measures will be available to address these concerns for intentional and unintentional entry into the proposed new Condition/Action a.2 of LCO 3.7.6.

Based on the low probability of a DBA occurring during the extended allowed outage time and the availability of the preplanned compensatory measures which meet the intent of GDC 19, the staff finds that the proposed changes are acceptable. The changes are in conformance with TSTF-287.

4.0 EXIGENT CIRCUMSTANCES

The Commission's regulations, 10 CFR 50.91, contain provisions for issuance of amendments when the usual 30-day public comment period cannot be met. Pursuant to 10 CFR 50.91(a)(6), the licensee requested the proposed amendment on an exigent basis. An exigency is a special exception where the staff and licensee need to act promptly. In this case, the change is needed to support control room ventilation tracer gas testing, which is being performed to satisfy NRC Generic Letter 2003-01. The test is scheduled for March 22, 2005. As the licensee was preparing for the test, it determined that the test could not be performed without this TS change. Without the change, the plant may be forced into an unnecessary shutdown to repair potential control room envelope discrepancies that would otherwise be repairable on-line under the provisions of TSTF 287. The licensee does not have the option of rescheduling the test because of vendor availability and its upcoming outage restrictions. Based upon its review, the staff agrees with the licensee that an exigent circumstance exists.

Under such circumstances, the Commission notifies the public in one of two ways: (1) by issuing a *Federal Register* notice providing an opportunity for hearing and allowing at least two weeks for prior public comments, or (2) by issuing a press release discussing the proposed changes, using local media. In this case, the Commission used the second approach and published a public notice in two local newspapers; the *Columbia The State* on March 16 and 17 and in the *Newberry Observer* on March 16 and 18.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in the margin of safety.

The proposed TS change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The Control Room Normal and Emergency Air Handling System and associated control room ventilation boundary provide a radiological controlled environment from which the plant can be operated following a DBA. The Control Room Normal and Emergency Air Handling System and the control room ventilation boundary are not assumed to be initiators of any analyzed accident and do not affect the probability of accidents.

The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change adds a Note to LCO 3.7.6 that allows the control room boundary to be opened intermittently under administrative controls. A new Condition/Action a.2 is also added to LCO 3.7.6 to specify a Completion Time of 24 hours to restore an inoperable control room boundary to OPERABLE status before requiring the plant to perform an orderly shutdown. This change is administrative in nature and does not involve any physical changes to the plant.

A significant reduction in the margin of safety is not caused by the proposed TS change. A Note is added to LCO 3.7.6 that allows the control room boundary to be opened intermittently under administrative controls. A new Condition/Action a.2 is also added to LCO 3.7.6 to specify a Completion Time of 24 hours to restore an inoperable control room boundary to OPERABLE status before requiring the plant to perform an orderly shutdown. The 24- hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period and SCE&G's commitment to implement, via administrative controls, appropriate compensatory measures consistent with the intent of 10 CFR 50, Appendix A, GDC 19. These compensatory measures will serve to minimize the consequences of an open control room boundary and assure that the Control Room Normal and Emergency Air Handling System can continue to perform its function.

Based upon the above considerations, the staff concludes that the amendment meets the three criteria of 10 CFR 50.92. Therefore, the staff has made a final determination that the proposed amendment does not involve a significant hazards consideration

6.0 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.

7.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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. 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 made a final finding that the amendment involves no significant hazards consideration. 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.

8.0 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 Contributors: Karen Cotton

Date: March 21, 2005

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