

September 26, 2003

Mr. Stephen A. Byrne  
Senior 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: TECHNICAL SPECIFICATION CHANGE REQUEST FOR  
EMERGENCY DIESEL GENERATOR START TIME AND SURVEILLANCE  
REQUIREMENT (TAC NO. MB6521)

Dear Mr. Byrne:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 164 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 September 24, 2002. On April 8, 2003, the licensee submitted a supplement to the amendment request and indicated that the supplement superseded the amendment request dated September 24, 2002. However, the April 8 supplement differed from the original submission only in form and not in substance. On May 21, 2003, the licensee submitted additional clarifying information.

The April 8 and May 21, 2003, letters provided clarifying information that did not change the initial proposed no significant hazards consideration determination or expand the scope of the application.

This amendment revises the Action Statement and surveillance requirements for the emergency diesel generators (EDGs). The proposed changes would revise TS Section 3.8.1.1, Action b.2 and Action c.2, and TS Section 4.8.1.1, "AC Sources" and associated Bases Section related to the EDG.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Biweekly *Federal Register* notice. This completes the staff's efforts on TAC No. MB6521

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. 164 to NPF-12
2. Safety Evaluation

cc w/encl: See next page

September 26, 2003

Mr. Stephen A. Byrne  
Senior 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: TECHNICAL SPECIFICATION CHANGE REQUEST FOR  
EMERGENCY DIESEL GENERATOR START TIME AND SURVEILLANCE  
REQUIREMENT (TAC NO. MB6521)

Dear Mr. Byrne:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 164 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 September 24, 2002. On April 8, 2003, the licensee submitted a supplement to the amendment request and indicated that the supplement superseded the amendment request dated September 24, 2002. However, the April 8 supplement differed from the original submission only in form and not in substance. On May 21, 2003, the licensee submitted additional clarifying information.

The April 8 and May 21, 2003, letters provided clarifying information that did not change the initial proposed no significant hazards consideration determination or expand the scope of the application.

This amendment revises the Action Statement and surveillance requirements for the emergency diesel generators (EDGs). The proposed changes would revise TS Section 3.8.1.1, Action b.2 and Action c.2, and TS Section 4.8.1.1, "AC Sources" and associated Bases Section related to the EDG.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's Biweekly *Federal Register* notice. This completes the staff's efforts on TAC No. MB6521

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. 164 to NPF-12
2. Safety Evaluation

cc w/encl: See next page

DISTRIBUTION: APal

PUBLIC

EHackett

OGC

ADAMS Accession No. ML032690359

JNakoski

BClayton (Hard Copy)ACRS

G Hill (2)

PD-II-1 R/F

K Landis, RII

\*SE input provided - no major changes made

KCotton

TBoyce

RDiaz

OFFICE	PM:PDII/S1	LA:PDII/S2	OGC*	EEIB/DE*	EMCB/DE*	SC:PDII/S1
NAME	KCotton	CHawes for BClayton	RWeisman			JNakoski
DATE	9/25/03	9/25/03	9/25/03	5/8/03	8/19/03	9/26/03

OFFICIAL RECORD COPY

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. 164  
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 September 24, 2002, supplemented by letters dated April 8 and May 21, 2003, 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. 164, 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 60 days of issuance. As part of implementation, the licensee shall describe, in the Updated Final Safety Analysis Report (UFSAR), examples of the exceptions to the applicable ASTM standards for diesel fuel oil testing set forth in the supplement dated May, 21, 2003, and evaluated in the NRC staff's safety evaluation dated September 26, 2003. This description shall be reflected in the next scheduled update of the UFSAR submitted to the NRC in accordance with 10 CFR 50.71(e). Should the licensee identify further examples, the licensee shall evaluate them pursuant to 10 CFR 50.59.

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: September 26, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 164

TO FACILITY OPERATING LICENSE NO. NPF-12

DOCKET NO. 50-395

Replace the following pages of the Appendix A Technical Specifications and associated Bases 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 8-1  
3/4 8-2  
3/4 8-3  
3/4 8-4  
3/4 8-5  
3/4 8-6  
B 3/4 8-1  
B 3/4 8-2  
B 3/4 8-3

Insert Pages

3/4 8-1  
3/4 8-2  
3/4 8-3  
3/4 8-4  
3/4 8-5  
3/4 8-6  
B 3/4 8-1  
B 3/4 8-2  
B 3/4 8-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 164 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 application dated September 24, 2002, supplemented by revisions submitted April 8 and May 21, 2003, South Carolina Electric & Gas Company (the licensee) requested changes to the Technical Specifications (TSs) for the Virgil C. Summer Nuclear Station. The proposed changes would revise the Action Statement and surveillance requirements (SRs) for the emergency diesel generators (EDGs). The proposed changes would revise TS Section 3.8.1.1, Actions b.2 and c.2, and TS Section 4.8.1.1, "AC Sources," and associated Bases Section related to the EDG. On April 8, 2003, the licensee submitted a supplement to the amendment request and indicated that the supplement superseded the amendment request dated September 24, 2002. However, the April 8 supplement differed from the original submission only in form and not in substance. On May 21, 2003, the licensee submitted additional clarifying information.

The April 8 and May 21, 2003, letters provided clarifying information that did not change the initial proposed no significant hazards consideration determination or expand the scope of the application.

2.0 REGULATORY EVALUATION

The regulatory requirements which the staff applied in its review of the amendment included: General Design Criterion (GDC)-17, "Electric Power System," of Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10 of *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities." GDC-17 requires that an onsite electric power system and an offsite electric power system be provided to permit functioning of structures, systems and components important to safety. GDC-17 further requires as follows: the onsite system is required to have sufficient independence, redundancy, and testability, to perform its safety function, assuming a single failure. The offsite power system is required to supply electric power with two physically independent circuits that are designed and located so as to minimize, to the extent practical, the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. In addition, this criterion

requires provisions to minimize the probability of losing electric power from the remaining electric power supplies as a result of loss of power from the unit, the offsite transmission network, or the onsite power supplies.

Criterion 18, "Inspection and Testing of Electric Power Systems," requires that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing.

As stated in 10 CFR 50.36, "Technical Specifications," a licensee's TSs will be derived from the analyses and evaluation included in the safety analysis report. Section 50.36 also requires TSs to include SRs relating to test, calibration, or inspection, to assure that necessary quality of systems and components is maintained, that the facility operation will be within safety limits, and that the limiting conditions for operation will be met.

Regulatory Guide (RG) 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used at Nuclear Power Plants," regulatory position C.5, states that each diesel engine be capable of starting and accelerating to rated speed, and that all the necessary Engineered Safeguards Features and Emergency Shutdown loads should be loaded onto the bus in an appropriate sequence. RG 1.108, "Periodic Testing of Diesel Generator Units Used as Electric Power Systems at Nuclear Power Plants," regulatory position C.2.a(l) states that at least once per 18 months, the EDG should be started and attain the required voltage and frequency within acceptable limits and times. This demonstration also needs to be performed on a periodic basis during normal operations.

RG 1.93, "Availability of Electric Power Sources," regulatory position C states that whenever the TSs allow power operation to continue during a specific degradation level, such continued power operation should be contingent on (a) immediate verification of the availability and integrity of the remaining sources, (b) re-evaluation of the availability of the remaining diesel generator(s) at a time interval.

The proposed changes are requested in accordance with 10 CFR 50.90 to assure continued compliance with 10 CFR Part 50, Appendix A, GDC-17, and GDC-18.

### 3.0 TECHNICAL EVALUATION

The licensee proposed the following changes:

3.1 At present TS 3.8.1.1 Action b.2 reads:

If the EDG became inoperable due to any cause other than preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining EDG by performing Surveillance Requirements 4.8.1.1.2.a.3 within 24 hours,\* and

\* This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

The revision would read:

\*If the EDG became inoperable due to any cause other than preplanned preventive maintenance or testing:

- a) determine the OPERABLE EDG is not inoperable due to a common cause failure within 24 hours, or
- b) demonstrate the OPERABILITY of the remaining EDG by performing Surveillance Requirement 4.8.1.1.2.a.3 within 24 hours, and

\*Completion of Action b.2 is required regardless of when the inoperable EDG is restored to OPERABILITY.

At present TS 3.8.1.1 Action c.2 reads:

If the EDG became inoperable due to any cause other than preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining EDG by performing Surveillance Requirements 4.8.1.1.2.a.3 within 8 hours,\* and

\* This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

The revision would read:

\*If the EDG became inoperable due to any cause other than preplanned preventive maintenance or testing:

- a) determine the OPERABLE EDG is not inoperable due to a common cause failure within 8 hours, or
- b) demonstrate the OPERABILITY of the remaining EDG by performing Surveillance Requirement 4.8.1.1.2.a.3 within 8 hours, and

\*Completion of Action c.2 is required regardless of when the inoperable EDG is restored to OPERABILITY.

The licensee stated that the normal TS surveillance testing schedule assures that operable EDG(s) are capable of performing their intended safety functions. A failure of one EDG does not reduce the reliability of an other, otherwise operable EDG. Deleting the existing requirement does not affect the design or performance characteristics of the EDGs, once common cause failure has been dismissed. Therefore, the EDGs maintain their ability to perform their design function. Many common cause failures are readily apparent with normal testing frequency and additional starts can cause premature wear and additional failures. NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," Section 10, discusses the impact on EDG reliability from excessive fast starts and loading. The Nuclear Regulatory Commission (NRC) staff, in NUREG-1366, Section 10, recommended that if a single EDG becomes inoperable, the remaining diesel generator(s) are to be tested when the



cause for inoperability has not been conclusively demonstrated to preclude the potential for a common mode failure.

On the basis of its review, the NRC staff finds that the amended required Actions b.2 and c.2 will provide an allowance to avoid unnecessary testing of operable EDGs. If it can be determined that the cause of the inoperable EDG does not exist on the operable EDG, SR 4.8.1.1.2.a.3 does not have to be performed. If the cause of the initial inoperable EDG cannot be confirmed not to exist on the remaining EDG, performance of SR 4.8.1.1.2.a.3 suffices to provide assurance of continued operability of that EDG. Hence, the NRC staff finds this amendment to be acceptable. The proposed change is also consistent with NUREG-1431 "Standard Technical Specifications Westinghouse Plants."

3.2 At present TS 4.8.1.1.2.f.1 reads:

Starting and accelerating the EDG to synchronous speed (504 rpm) with generator voltage and frequency at  $7200 \pm 720$  volts and  $60 \pm 1.2$  Hz within 10 seconds after the start signal. The EDG shall be started for this test by using one of the following signals:

The revision would read:

Verify each EDG starts from standby conditions and:

- a) In less than or equal to 10 seconds, achieves a voltage greater than 6480 volts ( $7200-720$  volts) and a frequency greater than 58.8Hz ( $60-1.2$  Hz).
- b) Achieves a steady state voltage greater than 6480 volts but less than 7920 volts and a steady state frequency greater than 58.8 Hz but less than 61.2 Hz.

The EDG shall be started for this test by using one of the following signals:

At present TS 4.8.1.1.2.g.5 reads:

Verifying that on an engineered safety feature (ESF) actuation test signal, without loss of offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be  $7200 \pm 720$  volts and  $60 \pm 1.2$  Hz within 10 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within these limits during this test. After 5 minutes of standby operation verify that on a simulated loss of offsite power:

The revision would read:

Verifying that on an ESF actuation test signal, without loss of offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. Verify that the EDG starts from standby conditions and in less than or equal to 10 seconds, achieves a voltage greater than 6480 volts and a frequency greater than 58.8Hz. After steady state operation is obtained, the EDG shall be verified to have a voltage greater than 6480 volts but less than 7920 volts and a frequency

greater than 58.8 Hz but less than 61.2 Hz. After 5 minutes of standby operation verify that on a simulated loss of offsite power:

The licensee indicated that the design function of the EDGs is to provide AC power to needed safety systems within a specific time period during any loss of offsite power (LOOP) event. The limiting design basis accident assumed is the loss of coolant accident concurrent with a LOOP. During these LOOP events the EDG starts and its output breaker closes on the de-energized bus to supply power. The EDG, once loaded, will maintain steady state voltage and frequency. It has been demonstrated by testing that instability is only significant during unloaded operations, particularly start-up.

The proposed amendment would modify the acceptance criteria for a surveillance test that verifies the capability of the EDGs to be ready to supply the necessary safety related equipment within the time assumed in the safety analysis for the limiting accident. This testing is performed with the EDG breaker open. The set-up on the EDG governor is the primary consideration as to whether the EDG can satisfy the requirements of the surveillance. A fragile balance exists between the stability of the EDG and the speed at which it accelerates to rated nominal values. With minor degradation, the EDG will not be stable enough to satisfy the existing acceptance criteria, or the EDG will not provide rated voltage and frequency within 10 seconds.

The EDG output breaker does not automatically close unless certain conditions are satisfied. One of these permissives is a de-energized bus; another is voltage and frequency within a specified range. Once these permissives are met, the breaker will close. With the breaker closed, the governor is essentially locked in and the EDG output is highly stable. The EDG is periodically tested with the breaker closing to verify that this capability (representative of a LOOP) is maintained. The testing performed with the breaker open only verifies the acceleration of the EDG and the voltage and frequency range that a steady state condition would provide.

Replacing the existing SR with two separate requirements that more closely follow the postulated accident scenario will give a benefit to the plant without decreasing confidence in the capability of the EDG. The benefits will include fewer test deficiencies and more stable output. There is no effect on the EDG capability to supply the minimum voltage and frequency required within the 10 second acceptance or the steady state voltage and frequency resulting from the accident analysis. The licensee stated that it had reviewed design calculations DC-836-008 and DC-960-002 and the change does not invalidate either the assumptions or the conclusions of the calculations. The EDGs will continue to perform their intended safety function per the design basis of the plant.

On the basis of its review, the NRC staff finds this change to be acceptable, since the proposed changes will have no effect on the EDG capability to supply the minimum voltage and frequency required within the 10 second acceptance criteria or the steady state voltage and frequency necessary to support accident analyses assumptions. The NRC staff finds reasonable the licensee's position that when the EDGs are started and not connected to any load during this test, there is a tendency for the voltage and frequency to overshoot their limits prior to settling down to the steady state values. Additionally, the time for the diesel generator to reach steady state operation, unless the modified start method is utilized, is periodically monitored and the

trend evaluated to identify degradation of the governor and voltage regulator performance. The NRC staff also determined that the changes are consistent with NUREG-1431.

3.3 At present, TS 4.8.1.1.2.d and TS 4.8.1.1.2.e read:

- 2.d. By sampling new fuel oil *in accordance with* the applicable ASTM [American Society for Testing and Materials] standard prior to addition to storage tanks and:
  - 1. By verifying in accordance with the tests *specified in the* applicable ASTM standard prior to addition to the storage tanks that the sample has:
    - a. An API Gravity of within 0.3 degrees at 60°F or at a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees;
    - b. A kinematic viscosity of 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but *not* less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;
    - c. A flash point equal to or greater than 125°F; and
    - d. A clear and bright appearance *with proper color* when tested *in accordance with* the applicable ASTM standard.
  - 2. By verifying within 30 days of obtaining the sample that the specified properties are met when tested *in accordance with* the applicable ASTM standard.
- 2.e. At least once every 31 days by obtaining a sample of fuel oil *in accordance with* the applicable ASTM standard, and verifying that total contamination is less than 10mg/liter when checked *in accordance with* the applicable ASTM standard.

The revision would read:

- 2.d. By sampling new fuel oil *based on* the applicable ASTM standard prior to addition to storage tanks and:
  - 1. By verifying in accordance with the tests *based on the* applicable ASTM standard prior to addition to the storage tanks that the sample has:
    - a. An API Gravity of within 0.3 degrees at 60°F or at a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees;

- b. A kinematic viscosity *at* 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;
  - c. A flash point equal to or greater than 125°F; and
  - d. A clear and bright appearance when tested *based on* the applicable ASTM standard.
2. By verifying within 30 days of obtaining the sample that the specified properties are met when tested *based on* the applicable ASTM standard.
- 2.e. At least once every 31 days by obtaining a sample of fuel oil *based on* the applicable ASTM standard, and verifying that total contamination is less than 10mg/liter when checked *based on* the applicable ASTM standard.

The amendment requested by the licensee will permit the upgrade of the ASTM fuel oil testing standard to newer versions. The licensee proposes to modify the wording in the TSs to permit surveillance "based on the applicable ASTM standard" as opposed to the current wording of "in accordance with the applicable ASTM standard." The licensee states that the proposed flexibility in the applicability of the ASTM standards pertaining to fuel oil surveillance testing will allow them to complete only those portions of the standards that are necessary to assure EDG fuel oil quality.

In a letter dated May 21, 2003, the licensee described its exceptions to the ASTM standards associated with the testing of diesel fuel oil as follows:

- (1) The sample containers used for sampling fuel oil using the ASTM D2276-88 (Determination of Particulate Contamination in Fuel Oil) method will not have a clean piece of plastic film rinsed with filtered petroleum ether placed over the top of the bottle.
- Basis: The plastic film is to prevent dust from entering the sample, typically on field samples. All analyses are performed in a laboratory environment where cleanliness is maintained. Plant procedures provide guidance for cleaning containers and equipment.
- (2) Filtered petroleum ether or filtered 1,1,2-trichloro-1,2,2-trifluoroethane used in the ASTM D2276-88 method may be substituted with unfiltered 1,1,2-trichloro-1,2,2-trifluoroethane, n-7-hexane or iso-octane.
- Basis: Petroleum ether is a hazardous chemical. 1,1,2-trichloro-1,2,2-trifluoroethane has been determined to be detrimental to the ozone layer of the earth's atmosphere and is being phased out of circulation. N-hexane or iso-octane are suitable replacements for these chemicals. These chemicals are purchased as ACS Reagent Grade and do not require filtration.
- (3) The viscometer bath temperature will be allowed a 0.05°C variation during the performance of Kinematic Viscosity, as described in ASTM D445 (Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids).

Basis: The cycle range of the viscosity baths would be +/- 0.05°C with this request. This slight variance has been determined not to significantly affect analytical results of diesel fuel oil analysis.

- (4) An alternate thermometer that meets the accuracy requirements of specified ASTM thermometers may be used during the analysis of diesel fuel oils.

Basis: An alternate thermometer that meets the stated ranges and accuracy requirements would still be used. The thermometers will be calibrated in the same manner as the ASTM thermometers. If an ASTM thermometer is unavailable, an alternate calibrated thermometer with the same specifications should be allowed.

- (5) The determination of Flash Point in oil testing analysis results will not be corrected for barometric pressure.

Basis: Historical data proves this correction does not add value for this location. Climate conditions for this area and laboratory controls render this requirement to be insignificant in determining the actual value of the flash point.

The NRC staff accepts the licensee's reasoning, set forth above, with respect to the proposed exceptions. Accordingly, the exceptions are not necessary to assure that the quality of the diesel fuel oil is maintained, and the NRC staff finds these exceptions acceptable. The NRC staff is confirming by license condition, that the licensee will reflect these exceptions in the Updated Final Safety Analysis Report (UFSAR). Changes and additions to the exceptions included in the UFSAR will be governed by the provisions of 10 CFR 50.59. Thus, appropriate regulatory control will be maintained over the licensee's implementation of the ASTM standards.

The licensee proposes to remove the words "with proper color" in TS 4.8.1.1.2.d.1.d. since the addition of some dyes to the fuel oil will prevent this requirement from being completed successfully. The licensee has been performing the clear and bright surveillance when unloading the fuel tanker, but with the addition of dye to the fuel oil, the term "proper color" is confusing and could cause an unsatisfactory surveillance if verbatim compliance is required. In order to supplement the surveillance requirement, the licensee has been performing water and sediment analysis on the fuel oil prior to unloading the tanker. This meets the requirements of ASTM Standard D1796 (Standard Test Method for Water and Sediment in Fuel Oils by the Centrifuge Method). The NRC staff, therefore, finds this change to be acceptable.

#### 4.0 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.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes SRs. 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 previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (67 FR 68742). 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.

## 6.0 CONCLUSION

The NRC staff concludes that the proposed changes will allow flexibility in the application of the ASTM standards pertaining to fuel oil surveillance testing, will have no adverse effect on the availability or operation of the associated equipment and will have no adverse effect on plant operation. As part of implementation, the licensee will describe, in the UFSAR, examples of the exceptions to the applicable ASTM standards for diesel fuel oil testing set forth in the supplemental information provided May 21, 2003. This description will be reflected in the next scheduled update of the UFSAR submitted to the NRC in accordance with 10 CFR 50.71(e). Should the licensee identify further examples, the licensee will evaluate them pursuant to 10 CFR 50.59.

The proposed changes are consistent with the guidance contained in RG 1.9 and NUREG-1431. Based on the above, the NRC staff also concludes that the proposed changes do not affect V.C. Summer's compliance with the requirements of GDC-17 and GDC-18 and, therefore, the proposed changes are acceptable.

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: Yamir Díaz  
Amar Pal

Date: September 26, 2003

Mr. Stephen A. Byrne  
South Carolina Electric & Gas Company

VIRGIL C. SUMMER NUCLEAR STATION

cc:

Mr. R. J. White  
Nuclear Coordinator  
S.C. Public Service Authority  
c/o Virgil C. Summer Nuclear Station  
Post Office Box 88, Mail Code 802  
Jenkinsville, South Carolina 29065

Ms. Kathryn M. Sutton, Esquire  
Winston & Strawn Law Firm  
1400 L Street, NW  
Washington, DC 20005-3502

Resident Inspector/Summer NPS  
c/o U.S. Nuclear Regulatory Commission  
576 Stairway Road  
Jenkinsville, South Carolina 29065

Chairman, Fairfield County Council  
Drawer 60  
Winnsboro, South Carolina 29180

Mr. Henry Porter, Assistant Director  
Division of Waste Management  
Bureau of Land & Waste Management  
Department of Health & Environmental  
Control  
2600 Bull Street  
Columbia, South Carolina 29201

Mr. Jeffery Archie, General Manager  
Nuclear Plant Operations  
South Carolina Electric & Gas Company  
Virgil C. Summer Nuclear Station  
Mail Code 303, Post Office Box 88  
Jenkinsville, South Carolina 29065

Mr. Ronald Clary, Manager  
Nuclear Licensing & Operating Experience  
South Carolina Electric & Gas Company  
Virgil C. Summer Nuclear Station  
Mail Code 830, Post Office Box 88  
Jenkinsville, South Carolina 29065