

SAFETY EVALUATION BY THE OFFICE OF NEW REACTORS

RELATED TO EXEMPTION AND AMENDMENT NO. 40

TO THE COMBINED LICENSE NOS. NPF-93 AND NPF-94

SOUTH CAROLINA ELECTRIC AND GAS COMPANY

SOUTH CAROLINA PUBLIC SERVICE AUTHORITY

VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3

DOCKET NOS. 52-027 AND 52-028

1.0 INTRODUCTION

By letter dated May 4, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15124A911), the South Carolina Electric and Gas Company (SCE&G/licensee) submitted license amendment request (LAR) 15-07 requesting that the U.S. Nuclear Regulatory Commission (NRC/Commission) amend the combined licenses (COLs) for the Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3, COL Numbers NPF-93 and NPF-94, respectively. The proposed LAR would redesignate the Updated Final Safety Analysis Report (UFSAR) Chapter 9, Tier 2\* Fire Area Figures 9A-1 through 9A-5 and 9A-201 in their entirety as Tier 2. The NRC reviewed these figures as part of the design certification rule that is incorporated by reference in the VCSNS Units 2 and 3 UFSAR.

In addition to the LAR, the licensee requested an exemption from the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, Appendix D, Section VIII.B.6.b, Item (4), "Design Certification Rule for the AP1000 Design, Processes for Changes and Departures," to allow the redesignation of the Fire Area Figures from Tier 2\* to Tier 2. Appendix D to 10 CFR 52, Section VIII.B.6.b, states that a licensee who references Appendix D may not depart from the following Tier 2\* matters without prior NRC approval, and lists fire areas as one such matter. As specified in that regulation, a request for a departure related to fire areas will be treated as a request for a license amendment under 10 CFR 50.90.

The licensee has requested an exemption to redesignate the Fire Area Figures as Tier 2, rather than the departure that would be required for changes to the figures that preserve the Tier 2\* designation, because it has been established that departures do not alter the change control process applicable to specific sections of a design certification document (DCD). As specified in Section II.C of Appendix D to 10 CFR Part 52, the plant-specific DCD consists of the generic DCD for a design, supplemented by any departures and exemptions made under Section VIII of the appendix. The Statement of Considerations for the AP1000 Rule that was subsequently published as Appendix D states that "changes to, or plant-specific departures from, information in the plant-specific DCD must be made under the change processes in section VIII of this appendix for the life of the plant," and that "Tier 2\* information identified in paragraph VIII.B.6.b

retains its Tier 2\* designation throughout the duration of the license, including any period of license renewal.” Accordingly, an ordinary departure to Tier 2\* information taken pursuant to Section VIII.B.6.b would retain the Tier 2\* designation, and subsequent departures to that departure would be subject to the change control process for Tier 2\* material. This redesignation of the Fire Area Figures from Tier 2\* to Tier 2, if approved, would make all Fire Area Figure changes subject to the existing change control processes governing Tier 2 information, set forth in 10 CFR Part 52 Appendix D, VIII.B.5. Under this change control process, any change meeting the applicable criteria would require prior NRC approval.

## 2.0 REGULATORY EVALUATION

The NRC staff considered the following regulatory requirements in reviewing the licensee’s proposed UFSAR changes.

The regulations found in 10 CFR 50.48(a)(1) requires a fire protection plan that satisfies 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 3, “Fire Protection.” GDC 3 requires structures, systems, and components important to safety to be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions.

Regulations in 10 CFR 50.48(a)(2)(iii) requires the licensee to describe specific features necessary to limit fire damage to structures, systems, or components important to safety so that the capability to shut down the plant safely is ensured.

Appendix D, “Design Certification Rule for the AP1000 Design,” of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants,” Section VIII.B.6.a requires NRC approval for departures from Tier 2\* information.

10 CFR 52.63(b)(1) allows a licensee to request NRC approval for an exemption from one or more elements of the certification information. The Commission may grant such a request only if it complies with the requirements of 10 CFR 52.7 which in turn points to the requirements listed in 10 CFR 50.12 for specific exemptions. 10 CFR 50.12(a)(1) requires that an exemption must be authorized by law, not present an undue risk to the public health and safety, and be consistent with the common defense and security. 10 CFR 50.12 (a)(2) states that the Commission will not grant an exemption unless special circumstances are present, and subsection (ii) of that rule provides that special circumstances are present when “application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.” In addition, 10 CFR 52.63(b)(1) states that an exemption can be approved if the special circumstances present outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption. Therefore, any exemption from the Tier 2\* information certified by Appendix D to 10 CFR Part 52 must meet the requirements of 10 CFR 50.12, 52.7, and 52.63(b)(1).

Regulations in 10 CFR 52.98(f) state that any modification to, addition to, or deletion from the terms and conditions of a COL including any modification to, addition to, or deletion from the ITAAC contained in the license is a proposed amendment to the license. Therefore, the proposed change requires a license amendment.

### 3.0 TECHNICAL EVALUATION

#### 3.1 EVALUATION OF EXEMPTION

The regulations in Section III.B of Appendix D to 10 CFR Part 52 require a holder of a COL referencing Appendix D to 10 CFR Part 52 to incorporate by reference and comply with the requirements of Appendix D, including certified information in Tier 2\* of the generic AP1000 DCD.

10 CFR Part 52, Appendix D, Section VIII.B.6.b, requires that a licensee who references Appendix D may not depart from Tier 2\* matters listed in Section VIII.B.6.b, without prior NRC approval. Section VIII.B.6.b, Item (4), identifies fire areas as one of the types of Tier 2\* matter within the scope of this regulation. The licensee has requested an LAR to reclassify Fire Area Figures 9A-1 through 9A-5 and 9A-201 as Tier 2 in their entirety, such that the change control process in Section VIII.b.5 would apply to any future departures. Therefore, to allow these Figures to be redesignated from Tier 2\* to Tier 2 for VCSNS Units 2 and 3, the licensee requests an exemption.

##### 3.1.1 AUTHORIZED BY LAW

10 CFR 52.63(b)(1) allows the NRC to grant exemptions from one or more elements of the certification information, in this case the requirements of Section III.B of Appendix D to 10 CFR Part 52, provided that the exemption complies with 10 CFR 52.7, which references the requirements of 10 CFR 50.12. In the context of the amendment request associated with the requested exemption, the NRC staff has determined that granting of the licensee's proposed exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commissions regulations. Therefore, as required by 10 CFR 50.12(a)(1), the exemption is authorized by law.

##### 3.1.2 NO UNDUE RISK TO THE PUBLIC HEALTH AND SAFETY

10 CFR Part 52, Appendix D, Section III.B requires the licensee to construct and operate the plant in accordance with the approved DCD incorporated by reference into the licensee's licensing basis. The plant-specific Tier 2\* DCD will continue to reflect the approved licensing basis for VCSNS Units 2 and 3 and will maintain a consistent level of detail with that which is currently provided elsewhere in Tier 2\* of the plant-specific DCD. These proposed LAR changes are evaluated and found to be acceptable in Section 3.2 of this Safety Evaluation. The proposed exemption would allow the licensee to reclassify Tier 2\* information described and justified in the LAR. Because the redesignation would subject the information to the existing Tier 2 change control process in Section VIII.B.5 of Appendix D, which requires prior NRC approval for safety significant changes, the exemption would not present an undue risk to the health and safety of the public. Therefore, as required by 10 CFR 50.12(a)(1), the staff finds that there is no undue risk to public health and safety.

##### 3.1.3 CONSISTENT WITH COMMON DEFENSE AND SECURITY

The proposed exemption would allow the licensee to implement approved changes to the Tier 2\* designation of the Fire Area Figures. The designation changes are limited to the specific details of Fire Area boundaries as depicted in Fire Area Figures 9A-1 through 9A-5 and 9A-201 and are not related to the security issues. The exemption would not alter the design, function, or operation of any plant equipment that is necessary to maintain a safe and secure status of

the plant. The proposed exemption has no impact on plant security or safeguards procedures, systems, or equipment. For these reasons, and as required by 10 CFR 50.12(a)(1), the staff finds that the exemption is consistent with the common defense and security.

#### 3.1.4 SPECIAL CIRCUMSTANCES

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(ii), are present whenever “application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.”

The rule under consideration is 10 CFR Part 52, Appendix D, Section VIII.B.6.b, Item (4), which requires prior NRC approval for any change to the Tier 2\* information related to Fire Area Figures. The underlying purpose of requiring prior NRC approval for changes to Tier 2\* information is to require prior NRC approval for changes to information with potential safety significance greater than that of other Tier 2 information.

Since certification of the AP1000 design, the NRC staff has gained experience with the review of changes to Fire Area Figures. To date, all submittals for license amendments involving changes to the Tier 2\* Fire Area Figures have been found acceptable and to be of minimal safety significance. For this reason, the NRC Staff believes there is no need to continue with these type of license amendment reviews, unless a specific request meets the criteria specified in the Tier 2 change control process in Section VIII.B.5 of Appendix D.

The change control process for Tier 2 information would allow changes without prior NRC approval only after conformance with the Tier 2 departure evaluation criteria, and any safety-significant changes would continue to require prior NRC approval. Because the staff expects most future changes to the Fire Area Figures to have minimal safety significance, and because the Tier 2 change control process provides for prior NRC approval for any changes that do have safety significance, application of 10 CFR Part 52, Appendix D, Section VIII.B.6, to Fire Area Figures is not necessary to achieve the underlying purpose of ensuring prior NRC approval of any changes with safety significance. Accordingly, the staff finds the special circumstances required by 10 CFR 50.12(a)(2)(ii) for the granting of an exemption exist.

#### 3.1.5 SPECIAL CIRCUMSTANCES OUTWEIGH REDUCED STANDARDIZATION

This exemption would allow the implementation of changes to VCSNS Units 2 and 3, Tier 2\* information proposed in the LAR. The exemption (designation of Tier 2\* information) is limited to Fire Area Figures 9A-1 through 9A-5 and 9A-201. Material related to the design, construction and operation of the facility that supports ITAAC acceptance criteria remain Tier 2\*, and the changes proposed by this exemption request do not change the design, construction, or operation of the facility. Only the change control process for Fire Area Figures 9A-1 through 9A-5 and 9A-201 is affected and this has minimal impact on design standardization and no safety impact. Based on these considerations, as required by 10 CFR 52.63(b)(1), the staff finds that the special circumstances outweigh the potential decrease in safety due to reduced standardization of the AP1000 design.

### 3.2 EVALUATION OF PROPOSED CHANGES

VCSNS Units 2 and 3 fire protection program is established such that a fire does not prevent safe shutdown of the plant and does not endanger the health and safety of the public. Fire protection at VCSNS Units 2 and 3 uses a defense-in-depth concept that includes fire

prevention, detection, control and extinguishing systems and equipment, administrative controls and procedures, and trained personnel. These defense-in-depth principles are achieved by meeting the following objectives:

- Prevent fires from starting;
- Detect rapidly, control, and extinguish promptly those fires that do occur;
- Provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities does not prevent the safe shutdown of the plant; and
- Minimize the potential for radiological releases.

VCSNS Units 2 and 3 are subdivided into fire areas to isolate potential fires and minimize the risk of the spread of fire and the resultant consequential damage from corrosive gases, fire suppression agents, smoke, and radioactive contamination. Fire barriers are provided in accordance with Branch Technical Position (BTP) CMEB 9.5-1. Fire Areas are depicted in the VCSNS Units 2 and 3 UFSAR Figures 9A-1, 9A-2, 9A-3, 9A-4, 9A-5, and 9A-201. These figures are designated as Tier 2\* by the use of brackets and italicized font in the title block and an associated note that reads, “\*NRC Staff approval is required prior to implementing a change to this information.” The UFSAR indicates that not all information on these Tier 2\* figures is considered to be Tier 2\* information, but the delineation between Tier 2 information and Tier 2\* information is not clearly specified in the UFSAR. In order to resolve this ambiguity on Fire Area Figures 9A-1 through 9A-5 and 9A-201 the licensee proposes to redesignate these figures as described below.

The following UFSAR changes would revise the titles of the following Appendix 9A Fire Area Figures from:

- Figure 9A-1 (Sheet 1 of 16) [Fire Areas Legend]\*
- Figure 9A-1 (Sheet 2 of 16) [Nuclear Island Fire Area Plan at Elevation 66'-6"]\*
- Figure 9A-1 (Sheet 3 of 16) [Nuclear Island Fire Area Plan at Elevation 82'-6"]\*
- Figure 9A-1 (Sheet 4 of 16) [Nuclear Island Fire Area Plan at Elevation 96'-6"]\*
- Figure 9A-1 (Sheet 5 of 16) [Nuclear Island Fire Areas Plan at Elevation 100'-0" & 107'-2"]\*
- Figure 9A-1 (Sheet 6 of 16) [Nuclear Island Fire Area Plan at Elevation 117'-6"]\*
- Figure 9A-1 (Sheet 7 of 16) [Nuclear Island Fire Area Plan at Elevation 135'-3"]\*
- Figure 9A-1 (Sheet 8 of 16) [Nuclear Island Fire Areas Plan at Elevation 153'-0" & 160'-6"]\*
- Figure 9A-1 (Sheet 9 of 16) [Nuclear Island Fire Areas Plan at Elevation 160'-6" & 180'-0"]\*
- Figure 9A-1 (Sheet 10 of 16) [Nuclear Island Fire Area Section A-A]\*
- Figure 9A-1 (Sheet 11 of 16) [Nuclear Island Fire Area Section B-B]\*
- Figure 9A-1 (Sheet 12 of 16) [Nuclear Island Fire Areas Section C-C & H-H]\*
- Figure 9A-1 (Sheet 13 of 16) [Nuclear Island Fire Area Section G-G]\*
- Figure 9A-1 (Sheet 14 of 16) [Nuclear Island Fire Area Section J-J]\*
- Figure 9A-1 (Sheet 15 of 16) [Nuclear Island Fire Area Section K-K]\*
- Figure 9A-1 (Sheet 16 of 16) [Nuclear Island Fire Areas Section I-I & R-R]\*
- Figure 9A-2 (Sheet 1 of 5) [Turbine Building Fire Area Plan at Elevation 100'-0"]\*
- Figure 9A-2 (Sheet 2 of 5) [Turbine Building Fire Area Plan at Elevation 120'-6"]\*
- Figure 9A-2 (Sheet 3 of 5) [Turbine Building Fire Area Plan at Elevation 141'-3"]\*
- Figure 9A-2 (Sheet 4 of 5) [Turbine Building Fire Area Plan at Elevation 170'-0"]\*
- Figure 9A-2 (Sheet 5 of 5) [Turbine Building Fire Areas Plan at Elevation 255'-3"]\*

Figure 9A-201 [Annex I & II Building Fire Areas Plan at Elevation 100'-0" & 107'-2"]\*  
Figure 9A-3 (Sheet 2 of 3) [Annex I & II Building Fire Area Plan at Elevation 117'-6"]\*  
Figure 9A-3 (Sheet 3 of 3) [Annex I & II Building Fire Area Plan at Elevation 135'-3"]\*  
Figure 9A-4 [Radwaste Building Fire Area Plan at Elevation 100'-0"]\*  
Figure 9A-5 [Diesel Generator Building Fire Area Plan at Elevation 100'-0"]\*

To read as follows:

Figure 9A-1 (Sheet 1 of 16) Fire Areas Legend  
Figure 9A-1 (Sheet 2 of 16) Nuclear Island Fire Area Plan at Elevation 66'-6"  
Figure 9A-1 (Sheet 3 of 16) Nuclear Island Fire Area Plan at Elevation 82'-6"  
Figure 9A-1 (Sheet 4 of 16) Nuclear Island Fire Area Plan at Elevation 96'-6"  
Figure 9A-1 (Sheet 5 of 16) Nuclear Island Fire Areas Plan at Elevation 100'-0" & 107'-2"  
Figure 9A-1 (Sheet 6 of 16) Nuclear Island Fire Area Plan at Elevation 117'-6"  
Figure 9A-1 (Sheet 7 of 16) Nuclear Island Fire Area Plan at Elevation 135'-3"  
Figure 9A-1 (Sheet 8 of 16) Nuclear Island Fire Areas Plan at Elevation 153'-0" & 160'-6"  
Figure 9A-1 (Sheet 9 of 16) Nuclear Island Fire Areas Plan at Elevation 160'-6" & 180'-0"  
Figure 9A-1 (Sheet 10 of 16) Nuclear Island Fire Area Section A-A  
Figure 9A-1 (Sheet 11 of 16) Nuclear Island Fire Area Section B-B  
Figure 9A-1 (Sheet 12 of 16) Nuclear Island Fire Areas Section C-C & H-H  
Figure 9A-1 (Sheet 13 of 16) Nuclear Island Fire Area Section G-G  
Figure 9A-1 (Sheet 14 of 16) Nuclear Island Fire Area Section J-J  
Figure 9A-1 (Sheet 15 of 16) Nuclear Island Fire Area Section K-K  
Figure 9A-1 (Sheet 16 of 16) Nuclear Island Fire Areas Section I-I & R-R  
Figure 9A-2 (Sheet 1 of 5) Turbine Building Fire Area Plan at Elevation 100'-0"  
Figure 9A-2 (Sheet 2 of 5) Turbine Building Fire Area Plan at Elevation 120'-6"  
Figure 9A-2 (Sheet 3 of 5) Turbine Building Fire Area Plan at Elevation 141'-3"  
Figure 9A-2 (Sheet 4 of 5) Turbine Building Fire Area Plan at Elevation 170'-0"  
Figure 9A-2 (Sheet 5 of 5) Turbine Building Fire Areas Plan at Elevation 255'-3"  
Figure 9A-201 Annex I & II Building Fire Areas Plan at Elevation 100'-0" & 107'-2"  
Figure 9A-3 (Sheet 2 of 3) Annex I & II Building Fire Area Plan at Elevation 117'-6"  
Figure 9A-3 (Sheet 3 of 3) Annex I & II Building Fire Area Plan at Elevation 135'-3"  
Figure 9A-4 Radwaste Building Fire Area Plan at Elevation 100'-0"  
Figure 9A-5 Diesel Generator Building Fire Area Plan at Elevation 100'-0"

Each of these figures would also be revised to remove the following note:

\*NRC Staff approval is required prior to implementing a change in this information

In their application, VCSNS proposed a change to COL Section 2.F, Exemptions, to add a new subsection 2.F(1)(c) that reflects this exemption. This change is not necessary, and it is not staff practice to continue to update this section of the COL to reflect exemptions granted after license issuance.

This reclassification would make all Fire Area Figure changes subject to the existing change control processes governing Tier 2 information, set forth in 10 CFR Part 52 Appendix D, VIII.B.5. Under this change control process, any change meeting the following criteria would require prior NRC approval:

VIII.B.5.b. A proposed departure from Tier 2, other than one affecting resolution of a severe accident issue identified in the plant-specific Design Control Document (DCD) or one affecting information required by 10 CFR 52.47(a)(28) to address 10 CFR 50.150, requires a license amendment if it would:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific DCD;
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD;
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

VIII.B.5.c. A proposed departure from Tier 2 affecting resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD, requires a license amendment if:

1. There is a substantial increase in the probability of an ex-vessel severe accident such that a particular ex-vessel severe accident previously reviewed and determined to be not credible could become credible; or
2. There is a substantial increase in the consequences to the public of a particular ex-vessel severe accident previously reviewed.

The term “departure from a method of evaluation” as used in Section VIII.B.5.b.8 above has a specific definition, as provided in Section II.G of the design certification rule. That definition is as follows:

10 CFR Part 52, Appendix D, Section II.G. Departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses means:

1. Changing any of the elements of the method described in the plant-specific DCD unless the results of the analysis are conservative or essentially the same; or
2. Changing from a method described in the plant-specific DCD to another method unless that method has been approved by the NRC for the intended application.

The method of evaluation used in establishing the design bases for the VCSNS Units 2 and 3 is described in Appendix 9A "Fire Protection Analysis," of the VCSNS UFSAR. The fire protection analysis is performed for each fire area using a methodology that follows the guidance of BTP CMEB 9.5-1. The methodology is described in Appendix 9A.2 of the referenced AP1000 DCD and the results of the analysis are provided in Appendix 9A.3.

The fire protection analysis evaluates the potential for occurrence of fires within the plant and documents the capabilities of the fire protection system and the capability to safely shut down the plant. The fire protection analysis is an integral part of the process of selecting fire prevention, detection, and suppression methods, and provides a design basis for the fire protection system.

The purpose of the fire protection analysis is as follows:

- Identify the potential for fires based on the type, quantity, and location of combustible materials
- Determine the consequences of postulated fires
- Provide a basis for decisions on how to prevent, detect, contain, and suppress fires
- Assess fire protection system adequacy
- Confirm the capability to safely shut down the plant following a fire

All the fire protection license amendment requests submitted by the licensee have been required due to changes to one of the above Tier 2\* Fire Area Figures. As described in Section 3.1.4 above, the NRC staff reviewed a number of these requests and determined that the proposed changes were not safety significant. Typical changes to the Fire Area Figures have involved information such as the room name or number changes, enclosing stairs in a fire rated barrier, adding exits to a building, changes to fire door locations, elevation changes, or changes to the shape of a room, and the NRC staff believes that future changes of this type will be of minimal safety significance and should not require NRC prior approval. However, any change to a Fire Area Figure, including any of the items listed above could require a license amendment request and prior NRC approval if it met the criteria set forth in 10 CFR Part 52 Appendix D, Section VIII.B.5.b.

Additionally, regular NRC inspections provide an additional measure of confidence regarding the safety of the fire protection program. The resident inspector assigned to a nuclear power plant performs a defense in depth walk down of four to six plant areas important to safety each

calendar quarter (REF 8). For the fire areas selected, the inspector would perform the following evaluations:

- Verify that the control of transient combustibles and ignition sources is in accordance with the licensee's administrative control procedures
- Inspect the fire detection system
- Inspect the fire suppression systems
- Inspect manual firefighting equipment and capability
- Inspect passive fire protection features

On an annual basis the resident inspector would also evaluate the licensee's fire brigade performance (REF 8). This review is conducted to ensure the capability of the fire brigade members, the leadership ability of the brigade leader, use of turnout gear and fire-fighting equipment, and the effectiveness of the team operation.

Every three years, an inspection team from the Regional Office's, which includes inspectors who are knowledgeable in the areas of fire protection, reactor operations, and electrical inspections, conduct a design-based, plant-specific, risk-informed, onsite inspection of the defense in depth elements used to mitigate the consequences of a fire. The review will include an assessment of the licensee's capability of problem identification and resolution of fire protection issues (REF 9).

Because most changes to Fire Area Figures are minor and of no safety significance, because changes that do have safety implications would be subject to prior NRC approval under 10 CFR Part 52 Appendix D, Section VIII.B.5.b, and because the adequacy of fire protection programs is verified on an ongoing basis by inspections, the staff concludes that redesignating Fire Area Figures 9A-1 through 9A-5 and 9A-201 as Tier 2 would not present an undue risk to the health and safety of the public and is consistent with the common defense and security.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations in 10 CFR 50.91(b)(2), the South Carolina State official was notified of the proposed issuance of the amendment. The State official had no comment.

#### 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, "Standards for Protection against Radiation." 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 (80 FR 65814; published on October 27, 2015). 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.

Because the exemption is necessary to allow the changes proposed in the license amendment, and because the exemption does not authorize any activities other than those proposed in the license amendment, the environmental consideration for the exemption is identical to that of the license amendment. Accordingly, the exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the exemption.

## 6.0 CONCLUSION

The staff has determined that pursuant to 10 CFR 52.7, 50.12 and 52.63(b)(1), the exemption: (1) is authorized by law, (2) presents no undue risk to the public health and safety, (3) is consistent with the common defense and security, (4) has special circumstances that outweigh the potential decrease in safety due to reduced standardization, and (5) does not significantly reduce the level of safety at the licensee's facility. Therefore, the staff grants the licensee an exemption from the requirements of 10 CFR 52, Appendix D, Section III.B.6, to change the designation of Fire Area Figures 9A-1 through 9A-5 and 9A-201 from Tier 2\* to Tier 2.

The staff has concluded, based on the considerations discussed above, that there is reasonable assurance that (1) 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 the health and safety of the public. Therefore, the staff finds the changes proposed in this license amendment acceptable.

## 7.0 REFERENCES

1. Request for License Amendment and Exemption Regarding Reclassification of Tier 2\* Information on Fire Area Figures (LAR-07) letter from South Carolina Electric and Gas Company, letter dated May 4, 2015 (ADAMS Accession No. ML15124A911).
2. Request for License Amendment and Exemption Regarding Reclassification of Tier 2\* Information on Fire Area Figures (LAR 15-007) letter from Southern Nuclear Operating Company, letter dated March 6, 2015 (ADAMS Accession No. ML15065A362).
3. AP1000 Design Certification Nuclear Regulatory Commission Final Rule, Federal Register/Volume 71, No.18, dated January 27, 2006, Pages 4464-4482.
4. AP1000 Design Control Document, Revision 19, DCD Tier 2, Appendix 9A "Fire Protection Analysis" (ADAMS Accession No. ML11171A499), dated June 13, 2011.
5. Final Safety Evaluation Report Related to Certification of the AP1000 Standard Plant Design, NUREG-1793, Supplement 2, dated August 5, 2011 (ADAMS Accession No. ML112061231).

6. Final Safety Evaluation Report for Combined Licenses for Virgil C. Summer Nuclear Station, Units 2 and 3, dated August 17, 2011 (ADAMS Accession No. ML110450305 - Package).
7. Virgil C Summer Nuclear Station Updated Final Safety Analysis Report (UFSAR), Chapter 9 Auxiliary Systems, Revision 3, dated July 1, 2015 (ADAMS Accession No. ML15196A312).
8. Inspection Procedure 71111.05AQ "Fire Protection (Annual/Quarterly)"
9. Inspection Procedure 71111.05T "Fire Protection (Triennial)"