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ATTN: Document Control Desk
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Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3
Combined License Nos. NPF-93 and NPF-94
Docket Nos. 52-027 & 52-028

Subject: LAR 13-34 Request for License Amendment and Exemption:
Reclassification of Portions of Human Factors Verification and Validation
Planning Documents (LAR 13-34)

Reference: 1. Southern Nuclear Operating Company, Vogtle Electric Generating
Plant Units 3 and 4 Reclassification of Portions of Human Factors
Verification and Validation Planning Documents (LAR-13-034)

2. Southern Nuclear Operating Company, Vogtle Electric Generating
Plants Units 3 and 4 Request for License Amendment and Exemption:
Reclassification of Portions of Human Factors Verification and Validation
Planning Documents Supplement (LAR-13-034S)

In accordance with the provisions of 10 CFR 50.90, South Carolina Electric & Gas Company (SCE&G) requests an amendment to the Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3 combined licenses (COLs) (License Nos. NPF-93 and NPF-94, respectively). The requested amendment reclassifies portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Subsection 18.11.2. These five documents outline the overall plan for HF V&V, including Human Factors Engineering (HFE) design verification, task support verification, integrated system validation, discrepancy resolution process, and verification at plant startup. The requested amendment identifies the portions of the five HF V&V planning documents that would more appropriately be classified as Tier 2, due to those portions having no impact on safety, and proposes the necessary departures to reclassify this information.

An exemption is also requested from the requirements of 10 CFR Part 52, Appendix D, Section VIII.B.6.c, Item (15) in accordance with 10 CFR 52.63(b), 52.7, and 50.12.

13-10, 13-18, and 13-19. However, the administrative activity to reclassify information currently identified as Tier 2* material requested by this LAR 13-34 is unrelated to the technical request provided in the other five LARs associated with the HF V&V planning documents.

The Description, Technical Evaluation, Regulatory Evaluation (including Significant Hazards Consideration), and Environmental Considerations for the proposed changes in the License Amendment Request (LAR) are contained in Enclosure 1 to this letter. Further justification for the associated exemption request is provided in Enclosure 2 to this letter. The proposed markups depicting the requested changes associated with this requested amendment are contained in Enclosure 3 to this letter. This proposed change is consistent and identical in technical content with the License Amendment Request requested by Southern Nuclear Operating Company identified in References 1 and 2.

SCE&G requests NRC staff review and approval of the license amendment by October 21, 2014. This license amendment will be implemented by SCE&G within 30 days of approval.

In accordance with 10 CFR 50.91, SCE&G is notifying the State of South Carolina of this LAR by transmitting a copy of this letter and enclosures to the designated State Official.

This letter contains no regulatory commitments.

Should you have any questions, please contact Ms. April R. Rice by telephone at (803) 941-9858, or by email at arice@scana.com.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 19th day of March, 2014.

Sincerely,



Ronald A. Jones
Vice President
New Nuclear Operations

JGE/RAJ/jge

Enclosure 1: Virgil C. Summer Units 2 and 3 – Request for License Amendment
Regarding Reclassification of Portions of Human Factors Verification and
Validation Planning Documents (LAR 13-34)

Enclosure 2: Virgil C. Summer Units 2 and 3 – Request for Exemption Associated with
License Amendment Request: Reclassification of Portions of Human
Factors Verification and Validation Planning Documents (LAR 13-34)

Enclosure 3: Virgil C. Summer Units 2 and 3 – Proposed Changes to the Licensing
Basis Documents

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South Carolina Electric & Company

V. C. Summer Units 2 and 3

NND-14-0151

Enclosure 1

Request for License Amendment:

**Reclassification of Portions of Human Factors
Verification and Validation Planning Documents**

(LAR 13-34)

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Pursuant to 10 CFR 50.90, South Carolina Electric & Gas Company (SCE&G) hereby requests an amendment to Combined License (COL) Numbers NPF-93 and NPF-94 for the V.C. Summer Nuclear Station Units 2 and 3, respectively.

1. Summary Description

The proposed changes reclassify portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Section 18.11.2. These documents outline the overall plan for HF V&V, including Human Factors Engineering (HFE) design verification, task support verification, integrated system validation, discrepancy resolution process, and verification at plant startup. The five HF V&V documents are currently classified as entirely Tier 2*. However, there is content in each of the documents that can be classified as Tier 2. The content being designated as Tier 2 has no impact on safety, nor does it affect the merits of the HF V&V activities. For example the content that would be designated as Tier 2 would include the documents' tables of contents, bibliography, and list of references. To effect this change, the revision numbers for each HFE document will now be identified as Tier 2 information. This differentiation will allow for revisions of the HF V&V documents for Tier 2 changes (e.g., updating the revision number for a reference) using the process provided in 10 CFR 52 Appendix, D § VIII.B.5. Updating revision numbers to the HFE documents arising from Tier 2* changes would continue to require NRC permission.

The requested amendment requires a change to Tier 2* information in the UFSAR. This enclosure requests approval of the license amendment necessary to implement these UFSAR changes.

2. Detailed Description and Technical Evaluation

The five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in UFSAR Table 1.6-1 and Chapter 18, Subsection 18.11.2, outline the overall plan for HF V&V. This includes the following topics:

- HFE Design Verification – Verifies that the human system interface (HSI) design conforms to HFE principles, guidelines, and standards.
- Task Support Verification – Verifies that the HSI design provides the necessary alarms, displays, and controls to support plant personnel tasks.
- Integrated System Validation – Validates that the HSI design can be effectively operated by personnel within the performance requirements.
- Discrepancy Resolution Process – Describes the process for prioritizing, recording, tracking and resolving all Human Engineering Discrepancies (HEDs) identified from the HFE verification and validation activities.
- Final Plant Design Verification – Verifies that the plant HFE/HSI conforms to the verified and validated design that resulted from the HSI design process. Verifies that the HEDs

have been resolved and the HFE adequacy of those items that could not be assessed until equipment is installed and/or testing is underway.

The five HF V&V documents listed in Table 1.6-1 and Chapter 18, Section 18.11.2 of the UFSAR are currently classified as Tier 2*. However, there is content in each of the documents that would more appropriately be classified as Tier 2. The content being designated as Tier 2 has no impact on safety, nor does it affect the merits of the HF V&V activities. The proposed changes identify the portions of the five HF V&V documents that are Tier 2 and those that are Tier 2*, including the revision numbers.

The proposed change adds clarifying notes to UFSAR Subsection 18.11.2 to identify the sections of the HF V&V planning documents that are Tier 2 and those that are Tier 2*. Similarly, the proposed change annotates each of the five documents with a note to identify the Tier 2 and Tier 2* sections. In addition, the proposed change reclassifies the revision number for each document as Tier 2 information by relocating the revision numbers outside of the bracketed portion of the document title in UFSAR Table 1.6-1 and Subsection 18.11.2, thereby allowing revisions to the Tier 2 information in these documents using the process provided in 10 CFR 52 Appendix D, Section VIII.B.5.

Licensing Basis Change Descriptions

The following changes to UFSAR Table 1.6-1 and Chapter 18, Subsection 18.11.2, are proposed to differentiate between the Tier 2 and Tier 2* portions of the five HF V&V documents. Specifically, the proposed changes add a note to the following references to identify the Tier 2 and Tier 2* section, and move the revision numbers outside the Tier 2* brackets, as shown below (changes shown in blue underlined font).

- In UFSAR Table 1.6-1, Material Referenced, revise information in the Title column for APP-OCS-GEH-120, 220, 320, 420, and 520, as follows:
 - AP1000 Human Factors Engineering Design Verification Plan*, 1* Revision 1, Westinghouse Electric Company LLC.
 - AP1000 Human Factors Engineering Task Support Verification Plan*, 1* Revision 1, Westinghouse Electric Company LLC.
 - AP1000 Human Factors Engineering Integrated System Validation Plan*, 1* Revision 3, Westinghouse Electric Company LLC.
 - AP1000 Human Factors Engineering Discrepancy Resolution Process*, 1* Revision 1, Westinghouse Electric Company LLC.
 - AP1000 Plant Startup Human Factors Engineering Design Verification Plan*, 1* Revision 2, Westinghouse Electric Company LLC.
- In UFSAR Chapter 18, Subsection 18.11.2, revise References 3, 4, 5, 6, and 7, as follows:
 - [3. APP-OCS-GEH-120, “AP1000 Human Factors Engineering Design Verification Plan,” 1* Revision 1, Westinghouse Electric Company LLC. (1)
 - [4. APP-OCS-GEH-220, “AP1000 Human Factors Engineering Task Support Verification Plan,” 1* Revision 1, Westinghouse Electric Company LLC. (2)

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- [5. APP-OCS-GEH-320, "AP1000 Human Factors Engineering Integrated System Validation Plan," 1* Revision 3, Westinghouse Electric Company LLC. (3)
- [6. APP-OCS-GEH-420, "AP1000 Human Factors Engineering Discrepancy Resolution Process," 1* Revision 1, Westinghouse Electric Company LLC. (4)
- [7. APP-OCS-GEH-520, "AP1000 Plant Startup Human Factors Engineering Design Verification Plan," 1* Revision 2, Westinghouse Electric Company LLC. (5)

Notes:

1. Section 1, Section 2, and Section 3 of APP-OCS-GEH-120 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
2. Section 1, Section 2, Section 3, Section 4, and Section 5 of APP-OCS-GEH-220 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
3. Section 1, Section 2, Section 3, Section 4, Section 5, Section 6, and Section 7 of APP-OCS-GEH-320 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
4. Section 1 and Section 2 of APP-OCS-GEH-420 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
5. Section 1, Section 2, and Section 3 of APP-OCS-GEH-520 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.

This activity does not permit Tier 2* information to be changed without prior NRC approval, but instead differentiates between Tier 2* information that needs prior NRC approval and Tier 2 information, which may be changed by the licensee in accordance with the 10 CFR 52, Appendix D, Section VIII.B.5. The added notes clearly identify which information within the Tier 2* documents remains Tier 2*. If Tier 2* information is changed within one of these five documents, then prior NRC approval would be needed before updating the document's revision number.

For each of the five HF V&V documents, the following sections are proposed to be designated as Tier 2 information:

- List of Contributors
- Revision History
- Table of Contents
- List of Tables
- List of Figures
- Acronyms and Trademarks
- Glossary of Terms
- References
- Bibliography

These sections provide information about the development, organization, and presentation of information in the document itself, but do not contain technical content regarding the details of the HF V&V plans. These sections have no impact on safety.

For the same reasons, the following additional sections in each document are proposed to be designated as Tier 2 information:

- **APP-OCS-GEH-120, “AP1000 Human Factors Engineering Design Verification Plan”**

Appendix A: HFE Design Verification Discrepancy Form

A Human Engineering Deficiencies (HED) form is entered in the HF Tracking System to document deviations of the Human System Interface (HSI) resources or Operation and Control Centers System (OCS) from the design guidelines. Appendix A provides an example screen shot of an HFE Design Verification Discrepancy tracking form.

This appendix is proposed to be reclassified as Tier 2, because it is a screen shot of an example form and contains no information related to the HFE design verification plan. The purpose of the form is to provide a guideline for tracking discrepancies.

Appendix B: Preliminary Allocation of HFE Design Guidelines to HSI Resources

Appendix B provides an initial basis to correlate the specific guidelines (mandatory and recommended) to the HSI resources, such as Wall Panel Information System (WPIS), Alarm Presentation System (APS), Computerized Procedure System (CPS), Primary Dedicated Safety Panel (PDSP), Secondary Dedicated Safety Panel (SDSP), Diverse Actuation System (DAS).

This appendix is proposed to be reclassified as Tier 2, because it is a tool used by Westinghouse to map requirements to HSI resources. This appendix includes preliminary information to provide guidance to the HF verifier and therefore may change.

Appendix C: Preliminary Allocation of HFE Design Guidelines to Operation and Control Centers

Appendix C provides an initial basis to correlate the specific guidelines (mandatory and recommended) to the OCS, such as the Main Control Room (MCR), MCR consoles, Remote Shutdown Room, Communication Facilities, Local Ovation Workstations, and Local Control Stations.

This appendix is proposed to be reclassified as Tier 2, because it is a tool used by Westinghouse to map requirements to specific OCS subsystems. This appendix includes preliminary information to provide guidance to the HF verifier and therefore may change.

- **APP-OCS-GEH-220, “AP1000 Human Factors Engineering Task Support Verification Plan”**

Appendix A: HF Task Support Verification Discrepancy Form

An HF Task Support Verification Discrepancy Form is used to document discrepancies identified during the task support verification process. Appendix A provides an example screen shot of an HF Task Support Verification Discrepancy Form to promote complete coverage and consistency in documentation.

This appendix is proposed to be reclassified as Tier 2, because it is a screen shot of an example form and contains no information related to the HFE design verification plan.

- **APP-OCS-GEH-320, “AP1000 Human Factors Engineering Integrated System Validation Plan”**

Questionnaires are one of the methods used to collect ISV results data used as the basis for determining whether the goals and performance requirements associated with the tasks were achieved. These questionnaires are to be completed by the ISV subjects and observers to assess situational awareness, workload, anthropometric and physiological factors, team performance, goal achievement, and usability. There are four questionnaires in APP-OCS-GEH-320.

The following four appendices are proposed to be reclassified as Tier 2, because they are tools used by Westinghouse to quantify the effectiveness of the trials and the performance of the personnel involved. The details in the questionnaires may be refined during the preparations for ISV.

Appendix A: Post-Trial Questionnaire for Subjects

Includes assessments of situation awareness, workload, team performance, and goal achievement.

Appendix B: Final Questionnaire for Subjects

Includes assessments of anthropometric and physiological factors, and usability.

Appendix C: Post-Trial Questionnaire for Observers

Includes assessments of team performance and goal achievement.

Appendix D: Final Questionnaire for Observers

Include assessments of anthropometric and physiological factors, and usability.

Appendices E and F provide example forms to assist in running the ISV trials and debriefing once the trials are complete.

This appendix is proposed to be reclassified as Tier 2, because they are tools used by Westinghouse to conduct and review the ISV trials. The appendices contain no information related to the HFE ISV plan.

Appendix E: Trial Protocol

This appendix provides the protocol and general sequence of events for running the ISV trials.

Appendix F: Debriefing Protocol

An informal debriefing of the test participants will be performed after each separate trial run. A formal debriefing will be held after each major period (typically one week) of testing. This appendix provides guidance for the formal debriefing process.

- **APP-OCS-GEH-420, “AP1000 Human Factors Engineering Discrepancy Resolution Process”**

No additional sections are proposed for reclassification as Tier 2 information.

- **APP-OCS-GEH-520, “AP1000 Plant Startup Human Factors Engineering Design Verification Plan”**

No additional sections are proposed for reclassification as Tier 2 information.

The proposed changes to reclassify portions of the five HF V&V planning documents are unrelated to any aspect of plant construction or operation that would introduce any change to effluent types (e.g., effluents containing chemicals or biocides, sanitary system effluents, and other effluents), or affect any plant radiological or non-radiological effluent release quantities. Furthermore, the proposed changes do not affect any effluent release path or diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation.

The proposed changes to reclassify portions of the five HF V&V planning documents do not affect any plant radiation zones (addressed in UFSAR Section 12.3), nor do they affect controls established under 10 CFR 20 to preclude a significant increase in occupational radiation exposure.

3. Technical Evaluation (Incorporated into Section 2, above)

4. Regulatory Evaluation

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 52, Appendix D, Section VIII.B, requires prior NRC approval for a departure from Tier 2* information. The requested amendment involves updating Tier 2* brackets and italicized text within the licensing basis, which constitutes departures from plant-specific Tier 2* information. Therefore, a license amendment request is required.

4.2 Precedent

No precedent is identified.

4.3 Significant Hazards Consideration Determination

The requested amendment reclassifies portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Section 18.11.2. These five documents outline the overall plan for HF V&V, including Human Factors Engineering (HFE) design verification, task support verification, integrated system validation, discrepancy resolution process, and verification at plant startup. The requested amendment identifies the portions of the five HF V&V planning documents that would more appropriately be classified as Tier 2, including the document revision numbers, and proposes the necessary departures to reclassify this information. This differentiation between Tier 2 and Tier 2* information in the HF V&V planning documents will allow for revisions of these documents for Tier 2 changes (e.g., updating the revision number for a reference) using the process provided in 10 CFR 52 Appx, D § VIII.B.5.

An evaluation to determine whether or not a significant hazards consideration is involved with the proposed amendment was completed by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

4.3.1 Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed changes reclassify portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in the Updated Final Safety Analysis Report (UFSAR). These changes do not modify the design, construction, or operation of any plant structures, systems, or components (SSC), nor do they change any procedures or method of control for any SSCs. Because the proposed changes do not change the design, construction, or operation of any SSCs, they do not adversely affect any design function as described in the UFSAR. Therefore, the proposed amendment does not affect the probability of an accident previously evaluated. Similarly, because the proposed changes do not alter the design or operation of the nuclear plant or any plant SSCs, the proposed changes do not represent a change to the radiological effects of an accident, and therefore, they do not involve an increase in the consequences of an accident previously evaluated.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

4.3.2 Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed changes are not a modification, addition to, or removal of any plant SSCs. Furthermore, the proposed changes are not a change to procedures or method of control of the nuclear plant or any plant SSCs. The only impact of this activity is the reclassification of portions of the five HF V&V planning documents as Tier 2 information. Because the proposed amendment does not change the design, construction, or operation of the nuclear plant or any plant operations, it does not affect the possibility of an accident.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

4.3.3 Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

The proposed changes reclassify portions of the five Tier 2* HF V&V planning documents listed in the UFSAR from Tier 2* to Tier 2. The proposed amendment only affects the classification of planning documents and does not change the design, construction, or operation of the nuclear plant or any plant operations; therefore, the changes do not affect any margin of safety.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, it is concluded that the proposed amendment does not involve a significant hazards under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusions

Based on the considerations discussed above, (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. The above evaluations demonstrate that the requested changes can be accommodated without an increase in the probability or consequences of an accident previously evaluated, without creating the possibility of a new or different kind of accident from any accident previously evaluated, and without a significant reduction in a margin of safety. Having arrived at negative declarations with regard to the criteria of 10 CFR 50.92, this assessment determined that the requested change does not involve a Significant Hazards Consideration.

5. Environmental Considerations

The requested amendment reclassifies portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Section 18.11.2. These five documents outline the overall plan for HF V&V, including Human Factors Engineering (HFE) design verification, task support verification, integrated system validation, discrepancy resolution process, and verification at plant startup. The requested amendment identifies the portions of the five HF V&V planning documents that would more appropriately be classified as Tier 2, including the document revision numbers, and proposes the necessary departures to reclassify this information. This differentiation between Tier 2 and Tier 2* information in the HF V&V planning documents will allow for revisions of these documents for Tier 2 changes (e.g., updating the revision number for a reference) using the process provided in 10 CFR 52 Appx, D § VIII.B.5.

The details of the proposed changes are provided in Section 2 of this licensing amendment request.

This review has determined the proposed departure requires an amendment to the COL; however, a review of the anticipated construction and operational effects of the proposed amendment has determined the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), in that:

(i) *There is no significant hazards consideration.*

As documented in Section 4.3, Significant Hazards Consideration, of this license amendment request, an evaluation was completed to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment." The Significant Hazards Consideration determined that (1) the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated; and (3) the proposed amendment does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

- (ii) *There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.*

The requested amendment reclassifies portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Section 18.11.2. The portions of the HF V&V planning documents that would more appropriately be classified as Tier 2, including the document revision numbers, are identified and changes are proposed to reclassify this information as Tier 2. This differentiation between Tier 2 and Tier 2* information in the HF V&V planning documents will allow for revisions of the Tier 2 portions of these documents using the process provided in 10 CFR 52 Appx, D § VIII.B.5. The proposed changes are unrelated to any aspect of plant construction or operation that would introduce any change to effluent types (e.g., effluents containing chemicals or biocides, sanitary system effluents, and other effluents), or affect any plant radiological or non-radiological effluent release quantities.

Furthermore, the proposed changes do not affect any effluent release path or diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation. Therefore, it is concluded that the proposed amendment does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

- (iii) *There is no significant increase in individual or cumulative occupational radiation exposure.*

The proposed changes to add notes to the UFSAR and move document revision numbers to outside the Tier 2* bracket do not affect how the plant is designed, constructed, or operated. Plant radiation zones (addressed in UFSAR Section 12.3) are not affected, and controls established under 10 CFR 20 to preclude a significant increase in occupational radiation exposure are not affected. Therefore, the proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above review of the proposed amendment, it has been determined that anticipated construction and operational effects of the proposed amendment do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment of the proposed amendment is not required.

6. References

None.

South Carolina Electric & Gas Company

V. C. Summer Units 2 and 3

NND-14-0151

Enclosure 2

**Request for Exemption Associated with License Amendment Request:
Reclassification of Portions of Human Factors Verification and Validation
Planning Documents**

(LAR 13-34)

1.0 Purpose

South Carolina Electric & Gas Company (the Licensee) requests an exemption from the provisions of 10 CFR 52, Appendix D, Section VIII.B.6.c, Item (15), "Design Certification Rule for the AP1000 Design, Scope and Contents," to allow a departure from the requirements of this regulation. The regulation, 10 CFR 52, Appendix D, Section VIII.B.6.c, requires that a licensee who references Appendix D may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from certain Tier 2* matters except under paragraph B.6.b of Section VIII. Section VIII.B.6.c, Item (15), identifies Human Factors Engineering as one of the types of Tier 2* matter within the scope of this regulation. The Licensee has requested a license amendment request (LAR) to reclassify portions of five Tier 2* Human Factors (HF) Verification and Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Subsection 18.1.2. Therefore, to allow these portions of HF information to be reclassified from Tier 2* to Tier 2 prior to achieving full power for each nuclear power plant unit [i.e., Units 2 and 3 of V.C. Summer Nuclear Station (VCSNS)], the Licensee requests an exemption.

This enclosure requests approval of an exemption from the requirements of 10 CFR 52, Appendix D, Section VIII.B.6.c, Item (15), as required to implement the proposed UFSAR changes. This request will provide for the application of the requirements for granting specific exemptions from the Commission's regulations, as specified in 10 CFR §§52.7, 52.63(b), and 50.12.

2.0 Background

The Licensee is the holder of Combined License Nos. NPF-93 and NPF-94, which authorize construction and operation of two Westinghouse Electric Company AP1000 nuclear plants, named V.C. Summer Nuclear Station (VCSNS) Units 2 and 3, respectively. The Licensee is currently in the process of developing, reviewing, and approving the HF V&V implementation documents following guidance provided in the HF V&V planning documents.

These documents outline the overall plan for HF V&V, including Human Factors Engineering (HFE) design verification, task support verification, integrated system validation, discrepancy resolution process, and verification at plant startup. The five HF V&V documents are currently classified as Tier 2* in their entirety. However, there is content in each of the documents that can be classified as Tier 2, because it has no impact on safety, nor does it affect the merits of the HF V&V activities. The Licensee expects that relatively inconsequential changes to information in the five HF V&V planning documents will be needed while preparing the associated implementation documents. To allow for revisions of the HF V&V documents using the appropriate change process provided in 10 CFR 52, Appendix D, Section VIII.B.5, the Licensee requested a license amendment to reclassify portions of the five Tier 2* HF V&V planning documents listed in UFSAR Table 1.6-1 and Chapter 18, Subsection 18.11.2.

3.0 Technical Justification of Acceptability

Detailed technical justification for this exemption is provided in Section 2 and 3 of the License Amendment Request in Enclosure 1.

4.0 Justification of Exemption

10 CFR Part 52, Appendix D, Section VIII.B.6.c states:

A licensee who references this appendix may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from the following Tier 2 matters except under paragraph B.6.b of this section. After the plant first achieves full power, the following Tier 2* matters revert to Tier 2 status and are subject to the departure provisions in paragraph B.5 of this section.*

* * *

(15) Human factors engineering.

* * *

Because the Licensee has identified changes to reclassify portions of five Tier 2* HF V&V planning documents to Tier 2, this change involves a departure from Tier 2* human factors engineering matters identified in Section VIII.B.6.c, Item (15). Therefore, an exemption is required to allow these portions of HF information to be reclassified from Tier 2* to Tier 2 prior to achieving full power for each nuclear power plant unit.

10 CFR Part 52, Appendix D, and 10 CFR §§ 50.12 and 52.7 state that the NRC may grant exemptions from the requirements of the regulations provided four conditions are met: 1) the exemption is authorized by law [§50.12(a)(1)]; 2) the exemption will not present an undue risk to the health and safety of the public [§50.12(a)(1)]; 3) the exemption is consistent with the common defense and security [§50.12(a)(1)]; and 4) special circumstances are present [§50.12(a)(2)].

The requested exemption satisfies the criteria for granting specific exemptions, as described below.

1. This exemption is authorized by law

The NRC has authority under 10 CFR §§ 50.12, 52.7, and 52.63 to grant exemptions from the requirements of NRC regulations. Specifically, 10 CFR §§50.12, 52.7, and 52.63(b)(1) state that the NRC may grant exemptions from the requirements of 10 CFR Part 52 upon a proper showing. No law exists that would preclude the changes covered by this exemption request. Additionally, granting of the proposed exemption does not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations.

Accordingly, this requested exemption is "authorized by law," as required by 10 CFR 50.12(a)(1).

2. This exemption will not present an undue risk to the health and safety of the public

The requested exemption from the requirements of 10 CFR 52, Appendix D, Section VIII.B.6.c, Item (15) reclassifies the portions of the five HF V&V planning documents that have no impact on safety, thereby allowing for revisions to these portions of these documents using the Tier 2 change process provided in 10 CFR 52, Appendix D, Section VIII.B.5. Because the proposed changes have no impact on safety, there is no adverse safety impact that would present any additional risk to the health and safety.

Therefore, the requested exemption from 10 CFR 52, Appendix D, Section VIII.B.6.c, Item (15) would not present an undue risk to the health and safety of the public.

3. The exemption is consistent with the common defense and security

The requested exemption from the requirements of 10 CFR 52, Appendix D, Section VIII.B.6.c, Item (15), reclassifies the portions of the five HF V&V planning documents. The exemption does not alter the design, function, or operation of any structures or plant equipment that are necessary to maintain a safe and secure status of the plant, nor does it affect compliance with any regulations associated with the physical protection of nuclear power plants or nuclear materials. The proposed exemption has no impact on plant security or safeguards procedures.

Therefore, the requested exemption is consistent with the common defense and security.

4. Special circumstances are present

10 CFR 50.12(a)(2) list six "special circumstances" for which an exemption may be granted.

Pursuant to the regulation, it is necessary for at least one of these special circumstances to be present before granting an exemption request. There are at least two of the six "special circumstances" present here.

First, the requested exemption meets 10 CFR 50.12(a)(2)(ii), which defines special circumstances as "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."

Second, the requested exemption meets 10 CFR 50.12(a)(2)(v), "The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation." The exemption would be "temporary relief" in that the exemption would expire for

each unit when that unit achieves full power following the 10 CFR 52.103(g) finding.

The rule under consideration in this request for exemption is 10 CFR Part 52, Appendix D, Section VIII.B.6.c, which requires that a licensee who references Appendix D may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from certain Tier 2* matters except under paragraph B.6.b of Section VIII. Section VIII.B.6.c, Item (15), identifies Human Factors Engineering as one of the types of Tier 2* matter within the scope of this regulation. The Licensee has requested a license amendment request (LAR) to reclassify portions of five Tier 2* Human Factors (HF) Verification and Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Subsection 18.1.2.

The underlying purpose of the regulation, Appendix D, Section VIII.B.6, as discussed in the Statement of Consideration for the AP1000 Design Certification Final Rule (76 FR 82090), is to differentiate between the information that needs to retain the Tier 2* designation throughout the lifetime of the facility, and that information whose designation would revert to Tier 2 after first full (100%) power. Accordingly, the purpose of Section VIII.B.6.c was not to subject licensees to more burdensome requirements for departures from plant-specific Tier 2* information prior to first full power, but rather to apply the more appropriate Tier 2 requirements for departure evaluations in Section VIII.B.5 after first full power. The proposed exemption from the requirements of 10 CFR 52, Appendix D, Section VIII.B.6.c reclassifies only the portions of the five HF V&V planning documents that have no impact on safety, thereby allowing for revisions to these portions of these documents using the Tier 2 change process provided in 10 CFR 52, Appendix D, Section VIII.B.5. The remaining portions of the HF V&V planning documents would still be subject to the Tier 2* change process requirements in 10 CFR 52, Appendix D, Section VIII.B.6. Accordingly, the underlying purpose of the rule will continue to be served by the requested exemption from 10 CFR 52, Appendix D, Section VIII.B.6. To allow these portions of HF information to be reclassified from Tier 2* to Tier 2 prior to achieving full power for each nuclear power plant unit, the Licensee requests an exemption for this period of time. The exemption would no longer be necessary when each unit achieves full power following the 10 CFR 52.103(g) finding, at which time the affected Tier 2* information would revert to Tier 2 status and subject to the departure provisions of Section VIII.B.5.

The Licensee has made a good faith effort to comply with the regulation by identifying only specific content in each of the documents that would more appropriately be classified as Tier 2. The content to be designated as Tier 2 has no impact on safety, nor does it affect the merits of the HF V&V activities. This differentiation will allow for revisions of the HF V&V documents for Tier 2 changes (e.g., updating the revision number for a reference) using the process provided in 10 CFR 52 Appendix D Section VIII.B.5. Updates to the HFE

documents arising from Tier 2* changes would continue to require prior NRC approval.

Therefore, special circumstances are present, because application of the regulation in the particular circumstances would not serve the underlying purpose of the rule and/or the exemption would provide only temporary relief from the applicable regulation. Further, the licensee or applicant has made good faith efforts to comply with the regulation.

5. The special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption

Based on the nature of the changes to reclassify portions of the plant-specific Tier 2* HF V&V planning document information and the understanding that these changes support development, review, and approval of the human factors (HF) verification and validation (V&V) implementation documents, it is likely that other AP1000 licensees will request this exemption. However, if this is not the case, the special circumstances continue to outweigh any decrease in safety because licensees that do not request these changes will still be subject to the Tier 2* change process requirements in 10 CFR 52, Appendix D, Section VIII.B.6. Furthermore, because the changes proposed by this exemption request do not change the design, construction, or operation of the facility, there is a minimal change from the generic AP1000 DCD, thereby minimizing the reduction in standardization and consequently the safety impact from the reduction.

Therefore, the special circumstances associated with the requested exemption outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption.

6. The design change will not result in a significant decrease in the level of safety.

The requested exemption revises the plant-specific DCD Tier 2* information by reclassifying only the portions of the five HF V&V planning documents that have no impact on safety. The proposed changes do not modify the design of any plant systems, structures, or components.

Therefore, the requested exemption does not represent a design change that would result in a significant decrease in the level of safety.

5.0 Risk Assessment

A risk assessment was determined to be not applicable to address the acceptability of this request.

6.0 Precedent

None.

7.0 Environmental Consideration

A review has determined that the proposed exemption would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed exemption does not involve (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Specific justification is provided in Section 5 of the corresponding amendment request. Accordingly, the proposed exemption meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed exemption.

8.0 Conclusion

The proposed changes to reclassify portions of five Tier 2* Human Factors (HF) Verification and Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Subsection 18.1.2, support development, review, and approval of the HF V&V implementation documents following guidance provided in the HF V&V planning documents. An exemption from the requirements of 10 CFR 52, Appendix D, Section VIII.B.6.c, Item (15), is necessary to allow implementation of the requested amendment prior to initially achieving full power for each nuclear power unit. The exemption request meets the requirements of 10 CFR 52.7, 10 CFR 50.12, and 10 CFR 51.22. Specifically, the exemption request meets the criteria of 10 CFR 50.12(a)(1) in that the request is authorized by law, presents no undue risk to public health and safety, and is consistent with the common defense and security. Furthermore, this request presents special circumstances because application of the regulation in the particular circumstances would not serve the underlying purpose of the rule and/or the exemption would provide only temporary relief from the applicable regulation and meets the eligibility requirements for categorical exclusion.

9.0 References

None.

South Carolina Electric & Gas Company

V. C. Summer Units 2 and 3

NND-14-0151

Enclosure 3

Proposed Changes to the Licensing Basis Documents

(3 Pages)

UFSAR Section 1.6, Table 1.6-1, Material Referenced:**Revise Tier 2* information, as shown below:**

DCD Section Number	Westinghouse Topical Report Number	Title
* * *		
18.11	[WCAP-15860	<i>Programmatic Level Description of the AP1000 Human Factors Verification and Validation Plan, Revision 2, October 2003]*</i>
	[APP-OCS-GEH-120	<i>AP1000 Human Factors Engineering Design Verification Plan, 1* Revision 1, Westinghouse Electric Company LLC</i>
	[APP-OCS-GEH-220	<i>AP1000 Human Factors Engineering Task Support Verification Plan, 1* Revision 1, Westinghouse Electric Company LLC</i>
	[APP-OCS-GEH-320	<i>AP1000 Human Factors Engineering Integrated System Validation Plan, 1* Revision 3, Westinghouse Electric Company LLC</i>
	[APP-OCS-GEH-420	<i>AP1000 Human Factors Engineering Discrepancy Resolution Process, 1* Revision 1, Westinghouse Electric Company LLC</i>
	[APP-OCS-GEH-520	<i>AP1000 Plant Startup Human Factors Engineering Verification Plan, 1* Revision 2, Westinghouse Electric Company LLC</i>
* * *		

UFSAR Section 18.11, Subsection 18.11.2, References:

Revise Tier 2* information, as shown below:

- [3. APP-OCS-GEH-120, "AP1000 Human Factors Engineering Design Verification Plan,"^{*} Revision 1, Westinghouse Electric Company LLC.⁽¹⁾
- [4. APP-OCS-GEH-220, "AP1000 Human Factors Engineering Task Support Verification Plan,"^{*} Revision 1, Westinghouse Electric Company LLC.⁽²⁾
- [5. APP-OCS-GEH-320, "AP1000 Human Factors Engineering Integrated System Validation Plan,"^{*} Revision 3, Westinghouse Electric Company LLC.⁽³⁾
- [6. APP-OCS-GEH-420, "AP1000 Human Factors Engineering Discrepancy Resolution Process,"^{*} Revision 1, Westinghouse Electric Company LLC.⁽⁴⁾
- [7. APP-OCS-GEH-520, "AP1000 Plant Startup Human Factors Engineering Verification Plan,"^{*} Revision 2, Westinghouse Electric Company LLC.⁽⁵⁾

Notes:

- 1. Section 1, Section 2, and Section 3 of APP-OCS-GEH-120 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
- 2. Section 1, Section 2, Section 3, Section 4, and Section 5 of APP-OCS-GEH-220 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
- 3. Section 1, Section 2, Section 3, Section 4, Section 5, Section 6, and Section 7 of APP-OCS-GEH-320 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
- 4. Section 1 and Section 2 of APP-OCS-GEH-420 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
- 5. Section 1, Section 2, and Section 3 of APP-OCS-GEH-520 are Tier 2*. Changes to these portions of the document require prior NRC approval. The remainder of the document, including its revision number, is Tier 2.
