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ND-14-0573  
10 CFR 50.90

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Units 3 and 4  
Response to Request for Additional Information  
Request for License Amendment and Exemption: Reclassification of Portions of Human Factors  
Verification and Validation Planning Documents (LAR-13-034S2)

Ladies and Gentlemen:

In accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC), the licensee for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, requested an amendment to Combined License (COL) Numbers NPF-91 and NPF-92 for VEGP Units 3 and 4, respectively, by letter dated November 27, 2013 (SNC letter ND-13-2349 [ADAMS Accession No. ML13331B502]). SNC requested the amendment to depart from approved AP1000 Design Control Document (DCD) Tier 2\* information as incorporated into the Updated Final Safety Analysis Report (UFSAR) to reclassify portions of the five Tier 2\* Human Factors (HF) Verification and Validation (V&V) planning documents listed in UFSAR Table 1.6-1 and Chapter 18, Subsection 18.11.2.

The Nuclear Regulatory Commission (NRC) staff issued Request for Additional Information (RAI) Letter No. 1, also referred to as electronic RAI (eRAI) 7464, associated with this License Amendment Request (LAR-13-034) on March 25, 2014 [ADAMS Accession No. ML14084A503]. This letter provides the response to RAI Letter No. 1, as Enclosure 4 of the LAR. Enclosure 4 also provides information regarding a specific change to Tier 2\* incorporated by reference information from APP-OCS-GEH-520, Revision 2, to apply the proposed changes in LAR-13-034 by re-designating the revision number in a Bibliography reference to more accurately reflect the current revision of the referenced document. To allow sufficient time to address this additional issue regarding the APP-OCS-GEH-520 Bibliography reference, the NRC Project Manager responsible for the review of LAR-13-034 has agreed that a two-week extension of the requested 45-day RAI response, would be acceptable. The revised information includes revisions to the proposed changes to the licensing basis documents that were provided in Enclosure 2 of the LAR.

The information provided in Enclosure 4 does not change the scope of, nor affect the Technical Evaluation or the conclusions of the Significant Hazards Consideration determination in the original license amendment request (LAR-13-034) submitted on November 27, 2013. This letter contains no regulatory commitments.

To allow sufficient time to implement the proposed amendment (including incorporation of changes to the licensing basis documents; e.g. the UFSAR), SNC requests to extend the requested 30-day implementation period to 90 days from the date of approval of the requested changes.

In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this LAR supplement by transmitting a copy of this letter and enclosure to the designated State Official.

Should you have any questions, please contact Mr. Jason Redd at (205) 992-6435.

Ms. Amy G. Aughtman states that: she is a Licensing Manager of Southern Nuclear Operating Company; she is authorized to execute this oath on behalf of Southern Nuclear Operating Company; and to the best of her knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



A. G. Aughtman

AGA/NH/kms

Sworn to and subscribed before me this 23<sup>rd</sup> day of May, 2014

Notary Public: Kristin Marie Seibert

My commission expires: August 16, 2016



Enclosures 1 and 2: (previously submitted with the original LAR, LAR-13-034, in SNC letter ND-13-2349)

Enclosure 3: (previously submitted with the first supplement, LAR-13-034S, in SNC letter ND-14-0233)

Enclosure 4: Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Supplemental Information Regarding License Amendment Request (LAR) 13-034 (LAR-13-034S2)

cc:

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Other

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**Southern Nuclear Operating Company**

**ND-14-0573**

**Enclosure 4**

**(Note that Enclosures 1 and 2 were provided with the original license amendment request, LAR-13-034, in SNC letter ND-13-2349 and Enclosure 3 was provided with the first supplement, LAR-13-034S, in SNC letter ND-14-0233)**

**Vogtle Electric Generating Plant (VEGP) Units 3 and 4**

**Supplemental Information Regarding  
License Amendment Request (LAR) 13-034  
(LAR-13-034S2)**

**(This enclosure contains six pages, including this cover page.)**

By letter dated November 27, 2013 (Southern Nuclear Operating Company [SNC] letter ND-13-2349), SNC requested an amendment to the combined licenses (COLs) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 (License Numbers NPF-91 and NPF-92, respectively) to depart from approved AP1000 Design Control Document (DCD) Tier 2\* information as incorporated into the Updated Final Safety Analysis Report (UFSAR) to reclassify portions of the five Tier 2\* Human Factors (HF) Verification and Validation (V&V) planning documents listed in UFSAR Table 1.6-1 and Chapter 18, Subsection 18.11.2. The Nuclear Regulatory Commission (NRC) staff issued Request for Additional Information (RAI) Letter No. 1, also referred to as electronic RAI (eRAI) 7464, associated with this License Amendment Request (LAR-13-034) on March 25, 2014 [ADAMS Accession No. ML14084A503]. This enclosure provides the response to RAI Letter No. 1, as Enclosure 4 of the LAR. The revised information includes revisions to the proposed changes to the licensing basis documents that were provided in Enclosure 2 of the LAR. In addition to including SNC's response to LAR-13-034 RAI Letter No. 1, this enclosure also presents a change to material currently designated as Tier 2\* that is incorporated by reference in the VEGP Units 3 and 4 UFSAR, as discussed below.

**Change to Tier 2\* Information Incorporated by Reference from APP-OCS-GEH-520, *Plant Startup Human Factors Engineering Design Verification Plan, Rev. 2***

HF V&V planning document, APP-OCS-GEH-520, *Plant Startup Human Factors Engineering Design Verification Plan*, Revision 2, is incorporated by reference in UFSAR Section 18.11, as indicated in UFSAR Table 1.6-1. A change is proposed to revise the Bibliography section of APP-OCS-GEH-520, Revision 2, to more accurately reflect the current revision of document APP-OCS-GEH-420, *AP1000 Human Factors Engineering Discrepancy Resolution Process*, as Revision 1. This proposed change only revises the revision number of a bibliography reference contained within the incorporated by reference document, and does not affect the technical content of information in the UFSAR (including information incorporated by reference from APP-OCS-GEH-420 or APP-OCS-GEH-520). Accordingly, this specific change is in accordance with the overall proposed change to re-designate certain Tier 2\* information, such as revision numbers, presented in these HF V&V planning documents. Therefore, this proposed change to Tier 2\* incorporated by reference material from APP-OCS-GEH-520, Revision 2, is within the scope of LAR-13-034, and does not affect the results or conclusions of the technical evaluation or Significant Hazards Considerations determination presented in LAR-13-034.

The following change is proposed for inclusion with the Proposed Changes to the Licensing Basis Documents provided in Enclosure 2 of LAR-13-034.

*Enclosure 2, page 3 of 3, UFSAR Section 18.11, is revised by adding the following new change:*

**Incorporated by reference text in APP-OCS-GEH-520, "Plant Startup Human Factors Engineering Design Verification Plan," Revision 2, Bibliography:**

Bibliography reference 6 on page *ix* of incorporated by reference material currently designated as Tier 2\* (proposed to be designated as Tier 2 in LAR-13-034) in APP-OCS-GEH-520, "Plant Startup Human Factors Engineering Design Verification Plan," Revision 2, is revised from:

6. APP-OCS-GEH-420, Rev. **2**, "AP1000 Human Factors Engineering Discrepancy Resolution Process," Westinghouse Electric Company LLC. (Proprietary)

To read:

6. APP-OCS-GEH-420, Rev. 1, "AP1000 Human Factors Engineering Discrepancy Resolution Process," Westinghouse Electric Company LLC. (Proprietary)

**eRAI Tracking No. 7464**

**NRC Question A:**

In the LAR 13-034, Reclassification of Portions of Human Factors Verification and Validation Planning Documents, (ML13331B502), SNC proposed to reclassify portions of the five Tier 2\* Human Factors (HF) Verification and Validation (V&V) planning documents listed (incorporated) in the UFSAR Table 1.6-1 and Section 18.11.2.

- The information in UFSAR Figure 18.11-1(AP1000 HFE Verification and Validation) is same as HFE report 320 Figure 1.1-1 (AP1000 Verification and Validation Activities).
- SNC stated that HFE 320 report (including Figure 1.1-1) contains proprietary information and as such should be withheld from public disclosure (August 22, 2013, ML13235A224).
- UFSAR Figure 18.11-1 is publicly available.
- The HFE report (320) is a Tier 2\* document (including Figure 1.1-1).
- Figure 18.11-1 of the UFSAR is a Tier 2 document.

**Clarify the inconsistency between the UFSAR and the HFE report (320).**

**SNC Response:**

The Integrated System Validation (ISV) provides a comprehensive human performance-based assessment of the final design of the AP1000 Human-System Interface (HSI) resources, based on their realistic operation within a simulator-driven Main Control Room (MCR). Tier 2\* Westinghouse proprietary document APP-OCS-GEH-320 (referred to hereafter as GEH-320), "AP1000 Human Factors Engineering Integrated System Validation Plan," describes the implementation plan for the ISV and includes proprietary Figure 1.1-1, a pictorial representation of the AP1000 validation and verification (V&V) activities. Accordingly, Westinghouse is the owner of the intellectual property in GEH-320, including Figure 1.1-1.

APP-OCS-GEH-320, Rev. D, Figure 1.1-1, which was referenced in the AP1000 Design Certification, was proprietary during the AP1000 design certification and Westinghouse continues to consider Figure 1.1-1 in GEH-320, Revision 3, to be proprietary. This figure is marked as proprietary because, along with other information in the GEH-320 document (and to some extent, APP-OCS-GEH-420), it describes the overall plan and the strategy for dealing with the HF V&V activities being executed in parallel. There has always been a slight difference between UFSAR Figure 18.11-1 and Figure 1.1-1 in Rev. D of GEH-320. Each of these figures is also different than what is provided in NUREG-0711, Revisions 1, 2, and 3. Therefore, the work that went into creating the differences from the NUREG and in the licensing bases is considered proprietary to Westinghouse and provides Westinghouse with a competitive edge over their competitors that have not had to develop this process yet.

As discussed in SNC LAR-13-001 (approved as Amendment No. 15 to Combined License (COL) Nos. NPF-91 and NPF-92 for VEGP Units 3 and 4, respectively), the version of Figure 1.1-1 in GEH-320, Revision 2, showed that the task support verification and design verification activities being complete prior to conducting ISV. This figure also implied that the results of these two activities would feed into the ISV. The process of detailed planning of the HF V&V activities demonstrated that some activities will need to be undertaken in parallel. Therefore, Figure 1.1-1 was revised in Revision 3 of GEH-320 to show that the task support verification and design verification will not be complete prior to ISV, and the results will not feed into the ISV.

The change description in LAR-13-001 does not detail exactly how GEH-320, Revision 3, Figure 1.1-1 is changed to differ from the figure that was previously provided in GEH-320, Revision 2 and earlier revisions, nor does it lay out a road map for changing the figure that is provided in the UFSAR. Rather, the details regarding the specific changes to GEH-320, Revision 3, Figure 1.1-1 are provided in the revised figure, which was identified as proprietary information in SNC Letter ND-13-1824, LAR-13-001S2, Enclosure 11. This figure was also identified as withheld proprietary information in Enclosure 12 of SNC Letter ND-13-1824. In accordance with 10 CFR 2.390(b)(4), the basis on which the information in GEH-320, Revision 3, is withheld is provided in ND-13-1824, Enclosures 14 and 15. Enclosure 15 also provides the name and contact information for the Westinghouse point of contact responsible for the proprietary aspects of the material included in LAR-13-001S2, including GEH-320, Revision 3, Figure 1.1-1. With the changes presented in Revision 3 of GEH-320, there is an even more pronounced difference between UFSAR Figure 18.11-1 and GEH-320, Revision 3, Figure 1.1-1. Accordingly, Figure 18.11-1 should have been removed from the UFSAR by LAR-13-001, as it is no longer consistent with GEH-320, Revision 3, Figure 1.1-1.

Therefore, to resolve the issue regarding any duplicated information presented in GEH-320, Revision 3, Figure 1.1-1 and UFSAR Figure 18.11-1, the Licensee is revising UFSAR Section 18.11 by deleting Figure 18.11-1 and the sentence referring to this figure. The remaining text in this paragraph provide an adequate description of the verification and validation activities conducted as part of the AP1000 human factors engineering program, without the pictorial depiction currently provided by UFSAR Figure 18.11-1. Incorporation of this change resolves the inconsistency regarding the designation of this figure, while maintaining the more restrictive requirements associated with the proprietary Tier 2\* information portrayed in GEH-320, Revision 3, Figure 1.1-1.

With the incorporation of this change, the identified condition regarding the Tier 2 designation of this UFSAR figure is no longer applicable.

**NRC Question B:**

The licensee has requested an exemption and departure to UFSAR Section 18.11, Subsection 18.11.2, References. The change includes adding notes which define which portions of the documents contain Tier 2\* information. The licensee's request states, "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." The five HFE documents will not be marked to identify which information is Tier 2\*.

The requested change makes the notes (defining the scope of the Tier 2\* information) Tier 2 subject to the change process provided in 10 CFR 52 Appendix, D § VIII.B.5.

**How is this change consistent with the requirement for departure from Tier 2\* provided in 10 CFR 52 Appendix, D § VIII.B.6?**

**SNC Response:**

The proposed change to add five Notes to UFSAR Subsection 18.11.2 is revised to use bracketed, italicized text to identify the portions of these five notes that are considered to be Tier 2\* information as shown below. (Note: Following the same approach as LAR-13-034, blue underlined font is used to designate new UFSAR text.)

The following change is proposed to the Proposed Changes to the Licensing Basis Documents in Enclosure 2 of LAR-13-034.

**Enclosure 2, page 3 of 3, UFSAR Section 18.11, Subsection 18.11.2, References:**

The Notes associated with the proposed revisions to Tier 2\* information in UFSAR Section 18.11, Subsection 18.11.2, References, are revised from:

**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.

To read:

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.