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

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Request for License Amendment and Exemption:
Annex Building Structure and Layout Changes (LAR-13-038)

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, requests an amendment to Combined License (COL) Numbers NPF-91 and NPF-92, for VEGP Units 3 and 4, respectively. The requested amendment requires changes to the Updated Final Safety Analysis Report (UFSAR) in the form of departures from the incorporated plant-specific Design Control Document (PS-DCD) Tier 2 information, and involves changes to related plant-specific Tier 2* and Tier 1 information, with corresponding changes to the associated COL Appendix C information. Pursuant to the provisions of 10 CFR 52.63(b)(1), an exemption from elements of the design as certified in the 10 CFR Part 52, Appendix D, design certification rule is also requested for the plant-specific DCD Tier 1 material departures.

The proposed departures consist of changes to a plant-specific Tier 1 (and COL Appendix C) table and figure and a UFSAR table, text, and figures related to reconfiguration of the annex building layout to accommodate a new battery equipment room, relocation of an annex building fire area barrier, increasing the thickness of certain annex building floor slabs, increasing the height of an annex building room, and incorporating editorial and consistency changes to a plant-specific Tier 1 table.

Enclosure 1 provides the description, technical evaluation, regulatory evaluation (including the Significant Hazards Consideration determination), and environmental considerations for the proposed changes in the License Amendment Request (LAR).

Enclosure 2 provides the background and supporting basis for the requested exemption.

Enclosure 3 identifies the requested changes and provides markups depicting the requested changes to the plant-specific Tier 1 and UFSAR text and tables that are available for disclosure to the public.

Enclosure 4 provides markups depicting the requested changes to the UFSAR figures which are withheld from public disclosure as Security-Related Information, in accordance with 10 CFR 2.390(d).

This letter contains no regulatory commitments.

SNC requests staff approval of this license amendment and exemption by December 2, 2014, to support construction of the walls in the lower elevations of the annex building. Delayed approval of this licensing request could result in delay of the associated construction activity and subsequent dependent construction activities. SNC expects to implement the proposed amendment (through incorporation into the licensing basis documents; e.g., the UFSAR) within 30 days of the approval of the requested changes.

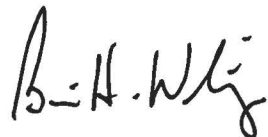
In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this LAR by transmitting a copy of this letter and enclosures to the designated State Official.

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

Mr. Brian H. Whitley states that: he is the Regulatory Affairs Director of Southern Nuclear Operating Company; he is authorized to execute this oath on behalf of Southern Nuclear Operating Company; and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



Brian H. Whitley

BHW/NH/dmw

Sworn to and subscribed before me this 22nd day of August, 2014

Notary Public: Dana Marie Williams

My commission expires: 12/1/2014



NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: Dec 1, 2014
BONDED THRU NOTARY PUBLIC UNDERWRITERS

- Enclosures:
- 1) Request for License Amendment, Annex Building Structure and Layout Changes (LAR-13-038)
 - 2) Exemption Request, Annex Building Structure and Layout Changes (LAR-13-038)
 - 3) Proposed Changes to the Licensing Basis Documents (LAR-13-038) (Publicly Available Information)
 - 4) Proposed Changes to the Licensing Basis Documents (LAR-13-038)
(Withheld Information)

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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4

ND-14-1257

Enclosure 1

Request for License Amendment
Annex Building Structure and Layout Changes
(LAR-13-038)

(20 pages, including this cover page)

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Pursuant to 10 CFR 50.90, Southern Nuclear Operating Company (SNC) hereby requests an amendment to Combined License (COL) Nos. NPF-91 and NPF-92 for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively.

1. Summary Description

The proposed changes revise the Combined Licenses (COLs) by revising the annex building internal configuration to include an additional battery equipment room, moving a fire area wall, increasing the height of a room, and increasing certain floor thicknesses. The proposed changes reconfigure existing rooms, including the related room, wall, and access path changes.

The requested amendment requires changes to the Updated Final Safety Analysis Report (UFSAR) in the form of departures from the incorporated plant-specific Design Control Document (PS-DCD) Tier 2 information (as detailed in Section 2), and involves changes to related plant-specific Tier 2* and Tier 1 information, with corresponding changes to the associated COL Appendix C information. This enclosure requests approval of the license amendment necessary to implement the Tier 2, Tier 2*, and COL changes. Enclosure 2 requests the exemption necessary to implement the involved changes to the plant-specific Tier 1 information.

2. Detailed Description

Background:

A battery room on annex building Elevation (El.) 117'-6" is not large enough to house both the battery and the battery's associated equipment (e.g., chargers, inverters, etc.), thus a new (nonsafety-related) battery (i.e., direct current [DC]) equipment room is needed. As a result, the layout in annex building El. 100'-0" is to be modified to house this new battery equipment room. Because this annex building El. 100'-0" layout change (described below) results in changes to plant-specific Tier 1 Figure 3.3-11A, this activity requires prior NRC approval. The battery room change on annex building El. 117'-6", which only involves changes to UFSAR (Tier 2) text, tables, and figures, is being evaluated by the Licensee in accordance with the 10 CFR Part 52, Appendix D, Section VIII departure evaluation requirements.

A number of the annex building concrete floors were designed to be six inches thick for radiation shielding purposes. However, the final design analyses determined that to adequately support the applied loads for the actual design equipment and arrangement of mechanical and electrical utilities to certain of those floors, their floor thicknesses need to increase to eight inches.

The ceiling of annex building Containment Filtration Room A (Room 40551) needs to be raised by four feet to accommodate the as-designed size of equipment and provide adequate space for access and maintenance. This change results in the floor elevation of Containment Filtration Room B (Room 40552) increasing from El. 146'-3" to 150'-3".

Annex Building El. 100'-0" Battery Equipment Room Related Changes:

The proposed changes would revise a portion of the annex building layout on El. 100'-0" by adding a new battery equipment room (40315) to house the battery equipment associated with the battery room on El. 117'-6".

By expanding Room 40305 to the north, west, and slightly to the south, Room 40305 would be large enough to support dividing it into two rooms, to provide the new battery equipment room (Room 40315) and still provide enough space for its initially intended purpose as a security ready room. No safety-related structure, system, component, analysis, or function is involved, and no safe shutdown function is affected. Although this change involves the relocation of the fire area boundary that encompasses Room 40305, Room 40315, and the other rooms associated with this change, it does not change a performance requirement for any fire boundary barrier.

Room 40315 is to be located in approximately the same building location as existing Room 40305, and Room 40315 is to be in the same fire zone (4031 AF 40300) as Room 40305. The addition of Room 40315 requires the restroom (40304) to be moved, to allow space for Room 40305 to be reconfigured and relocated in the same general area. These changes are confined within Fire Area 4031 AF 05, and there is no fire boundary (e.g., wall, location change, total area) change or fire boundary fire barrier performance (i.e., the two-hour designed fire rating) change.

Annex Building El. 100'-0" Fire Area Wall Change:

The north-south portion of annex building Access Corridor 40301 is 12 feet wide. The east-west portion of Access Corridor 40301, at the entry from the annex building, is approximately 10 feet wide and is adequate for equipment and personnel movements, thus the north-south portion of Access Corridor 40301 is larger than needed. A more effective use of the floor area would be achieved by relocating the common (north-south oriented) wall between Corridor 40301 and Rooms 40300 and 40302 two feet to the west, thereby providing a uniform approximately 10-foot wide corridor. This change would reduce the north-south portion of Access Corridor 40301 width to approximately 10 feet, thereby increasing the sizes of Rooms 40300 and 40302. The north-south oriented wall to be relocated is a non-structural wall, has a two-hour fire rating, and forms part of the boundary between Fire Areas 4031 AF 05 and 4031 AF 06. The fire rating of the wall is maintained.

Relocating the north-south corridor wall changes the floor areas of Fire Areas 4031 AF 05 and 4031 AF 06. The floor area changes affect the fire loads analysis, thus a change is proposed to update that portion of the fire loads analysis.

Annex Building Floor Thickness Increases:

The El. 117'-6" floor slab thickness between Column Lines 9 and 13 and Column Lines E and I.1, the El. 135'-3" floor slab thickness between Column Lines 2 and 4 and Column Lines E and H, the El. 135'-3" floor slab thickness between Column Lines 4 and 4.1 and Column Lines E and H, and the Containment Filtration Room B (Room 40552) floor slab thickness are to be increased from six inches to eight inches.

Annex Building Containment Filtration Room A Height Increase:

The ceiling height of Containment Filtration Room A (Room 40551) is to be raised by four feet, thereby raising the floor elevation of Containment Filtration Room B (Room 40552) from El. 146'-3" to 150'-3".

Plant-Specific Tier 1 Editorial Changes:

The following editorial changes are proposed to plant-specific Tier 1 Table 3.3-1 to more accurately reflect the annex building structure and layout.

- In Table 3.3-1, the entries for "Containment Filtration Rm A (North Wall)" and "Containment Filtration Rm A (East Wall)" each indicate an elevation from El. 135'-3" to 158'-0". However, Room A is directly below Room B, so the north and east walls actually serve both rooms by extending from the Room A floor elevation (El. 135'-3") to the Room B ceiling elevation (El. 158'-0"). Therefore, a change is proposed to the Wall or Section Description for both walls to refer to them as "Containment Filtration Rms A and B" walls.
- In the first Table 3.3-1 annex building "Floor" row for El. 135'-3", the Column Line entry is inconsistent with other similar row entries and is potentially confusing. The "shield wall between E and F to column line H" is actually a single wall that runs from Column Line E to Column Line H. Therefore, for clarity and to be consistent with the other floor entries, a change is proposed to simplify this floor description by identifying it as "From 2 to 4 and E to H".

Licensing Basis Change Descriptions

This section describes the licensing basis changes associated with each of the change activities described above. Table 2-1, below, lists the changes to the licensing basis text, tables, and figures sought with regard to the following proposed change descriptions, and organizes the changes to identify the Tier 2 changes with their associated Tier 1 and/or Tier 2* changes.

The addition of Room 40315 and reconfiguration of annex building Rooms 40301, 40304, and 40305 result in proposed changes to the building layout as depicted in UFSAR Figures 1.2-201, 3.7.2-19 (Sh 1 and 7), 9A-201, 12.3-201, 12.3-202, and 12.3-203. In addition, a change is proposed to add a new fire zone to UFSAR Subsection 9A.3.4.9 and to update the fire loads in Table 9A-3 to account for the addition of Room 40315. Note: consistent with the terminology used to identify other rooms in the security area, the new battery equipment room (Room 40315) is simply identified as a "security room" in the UFSAR.

The proposed UFSAR figure changes also necessitate corresponding changes to Tier 1 Figure 3.3-11A, Annex Building Plan View at Elevation 100'-0". The physical arrangement of the annex building is referred to in Tier 1 Section 3.3, Table 3.3-1, and Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Table 3.3-6. However, this design change does not require a change to either of those Tier 1 tables.

In UFSAR Figure 9A-201, *Annex I & II Building Fire Areas Plan at Elevation 100'-0" & 107'-2"*, a change is proposed to move the common (north-south oriented) wall between annex building Corridor 40301 and Rooms 40300 and 40302 two feet to the west. Because this wall is part of the boundary between Fire Areas 4031 AF 05 and 4031 AF 06, this change constitutes a Tier 2* information change.

Consistent with the change to Tier 2* information in Figure 9A-201, a change is proposed to move the common north-south oriented wall between Corridor 40301 and Rooms 40300 and 40302 two feet to the west in UFSAR Figures 1.2-201, 3.7.2-19 (Sh 1), 3.7.2-19 (Sh 7), 12.3-201, 12.3-202 and 12.3-203.

In UFSAR Table 9A-3, a change is proposed to the Fire Area "4031 AF 05" combustible loads, floor areas, equivalent durations and totals.

In UFSAR Table 9A-3, a change is proposed to the Fire Area "4031 AF 06" the total floor area, combustible load and equivalent duration.

The El. 135'-3" floor thickness increase necessitates changes to UFSAR Figures 3.7.2-19 (Sh 7), 3.7.2-19 (Sh 8) and 3.7.2-19 (Sh 9, Section D-D). (Note: Changing the floor thickness to 8" at El. 135'-3" in UFSAR Figure 3.7.2-19 (Sh 8) between Column Lines 2 and 4 and Rows E and H resolves an existing UFSAR inconsistency. The current figure shows a floor slab thickness of 1'-0". This value is not consistent with the thickness of the same floor slab, as currently indicated in UFSAR Figure 3.7.2-19 (Sh 9, Section D-D) and the previous design analyses, both of which specify a 6" thickness.) The resulting plant-specific Tier 1 changes are:

- To maintain consistency with the annex building design and UFSAR Figures 3.7.2-19 (Sh 7), 3.7.2-19 (Sh 8) and 3.7.2-19 (Sh 9, Section D-D), a change is proposed to revise the Concrete Thickness in the first Table 3.3-1 Annex Building "Floor" row from 0'-6" to 0'-8".

To enhance the accuracy of Tier 1 Table 3.3-1 a change is proposed to modify an existing line item and add a new line item pertaining to the Annex Building corridor wall between Column Lines G and H. The table identifies the Annex Building corridor wall between G and H as going from Column Line 9 to Column Line 13 between elevations 100'-0" and 135'-3". However, UFSAR Figures 3.7.2-19 (Sh 1) (before and after the changes described in this LAR) shows that the wall does not completely extend to Column Line 13 between elevations 100'-0" and 117'-6". UFSAR Figure 3.7.2-19 (Sh 2) shows that the wall completely extends to Column Line 13 between elevations 117'-6" and 135'-3". A change is proposed to revise the current line item to indicate that this wall runs from Column Line 9 to "near" Column Line 13, and to change the upper value of the elevation range from 135'-3" to 117'-6". A second change is proposed to add a new Table 3.3-1 line item to indicate that the annex building corridor wall between G and H runs from Column Line 9 to Column Line 13

between elevations 117'-6" and 135'-3". These two changes align the configurations shown in Tier 1 with the configurations depicted in UFSAR Figure 3.7.2-19 and are not the result of a design change.

The proposed change to the El. 117'-6" floor slab thickness affects UFSAR Figures 3.7.2-19 (Sh 7) and 3.7.2-19 (Sh 10, Section H-H). The resulting plant-specific Tier 1 proposed change is:

- To maintain consistency with the annex building design and UFSAR Figures 3.7.2-19 (Sh 7) and 3.7.2-19 (Sh 10, Section H-H), it is proposed that the "Concrete Thickness" in the third annex building "Floor" row in Tier 1 Table 3.3-1 be changed from 6" to 8".

The Containment Filtration Room B (Room 40552) floor slab thickness change, the 8" floor thickness is to be indicated on UFSAR Figure 3.7.2-19 (Sh 7). The resulting plant-specific Tier 1 change is:

- To maintain consistency with the annex building design and revised UFSAR Figure 3.7.2-19 (Sh 7), in the Tier 1 Table 3.3-1 annex building "Containment Filtration Rm B (Floor)" row, the "Concrete Thickness" is to be changed from 0'-6" to 0'-8".

The proposed Containment Filtration Room A (Room 40551) ceiling height change affects UFSAR subsection 9.4.7.2.1 and UFSAR Figures 1.2-20, 3.7.2-19 (Sh 4), 3.7.2-19 (Sh 7), 9A-3 (Sh 3), 12.3-1 (Sh 13), 12.3-2 (Sh 13), and 12.3-3 (Sh 13). The resulting plant-specific Tier 1 changes are:

- To maintain consistency with the annex building design and UFSAR subsection 9.4.7.2.1 and UFSAR Figures 1.2-20, 3.7.2-19 (Sh 4), 3.7.2-19 (Sh 7), 9A-3 (Sh 3), 12.3-1 (Sh 13), 12.3-2 (Sh 13), and 12.3-3 (Sh 13), in Tier 1 Table 3.3-1, the annex building "Containment Filtration Rm B (Floor)" "Floor Elevation" is proposed to be changed from El. 146'-3" to 150'-3".
- The Tier 1 Table 3.3-1 annex building upper value of the "Elevation Range" for the "Containment Filtration Rm A (West wall)" is proposed to be changed from El. 158'-0" to 150'-3". (Note: the current 158'-0" value represents an existing inconsistency between the design figures in the UFSAR and the values presented in Tier 1 Table 3.3-1. A change is proposed to identify the upper value for the Room A west wall "Elevation Range" as 150'-3", which is consistent with the proposed change to the Room B floor from El. 146'-3" to 150'-3".)
- The Tier 1 Table 3.3-1 annex building "Elevation Range" for the "Containment Filtration Rm B (West wall)" lower value is proposed to be changed from El. 146'-3" to 150'-3".

The proposed Tier 1 Table 3.3-1 changes to refer to the "Containment Filtration Rm A (North Wall)" and "Containment Filtration Rm A (East Wall)" as "Containment Filtration Rms A and B" are editorial (i.e., non-technical) changes for clarity and consistency. No design change is involved.

The proposed change to clarify the column lines for the first annex building "Floor" row in Tier 1 Table 3.3-1 as "From 2 to 4 and E to H" is an editorial change for clarity and to be consistent with other similar row entries. No design change is involved.

Note: Figures identified as Sensitive Unclassified Non-Safeguards Information (SUNSI) contain security-related information and are withheld from public disclosure in accordance with 10 CFR 2.390(d).

Table 2-1 Licensing Basis Changes

Description of Proposed Change		Plant Specific Licensing Basis Change		
		UFSAR Tier 2	UFSAR Tier 2*	COL Appendix C (and Tier 1)
1	Annex Building El. 100'-0" layout change			
	a. Add a new battery equipment room (40315)	<ul style="list-style-type: none"> • Fig. 1.2-201 (SUNSI) • Fig. 3.7.2-19 (Sh 1) (SUNSI) • Fig. 3.7.2-19 (Sh 7) (SUNSI) • Subsection 9A.3.4.9 • Table 9A-3 (SUNSI) • Fig. 9A-201 (SUNSI) • Fig. 12.3-201 (SUNSI) • Fig. 12.3-202 (SUNSI) • Fig. 12.3-203 (SUNSI) 		Tier 1 Fig. 3.3-11A (SUNSI)
	b. Fire area wall change	<ul style="list-style-type: none"> • Fig. 1.2-201 (SUNSI) • Fig. 3.7.2-19 (Sh 1) (SUNSI) • Fig. 3.7.2-19 (Sh 7) (SUNSI) • Table 9A-3 • Fig. 12.3-201 (SUNSI) • Fig. 12.3-202 (SUNSI) • Fig. 12.3-203 (SUNSI) 	Fig. 9A-201 (SUNSI)	Tier 1 Fig. 3.3-11A (SUNSI)
	c. Fire loads analysis change	Table 9A-3		
2	Annex Building floor thickness increase from six inches to eight inches			
	a. El. 117'-6" floor slab thickness changes between Column Lines 9 and 13 and Column Lines E and I.1	<ul style="list-style-type: none"> • Fig. 3.7.2-19 (Sh 7) • Fig. 3.7.2-19 (Sh 10, Sect. H-H) (SUNSI) 		Tier 1 Table 3.3-1
	b. El. 135'-3" floor slab thickness changes between Column Lines 2 and 4 and Column Lines E and H; and between Column Lines 4 and 4.1 and Column Lines E and H	<ul style="list-style-type: none"> • Fig. 3.7.2-19 (Sh 7) (SUNSI) • Fig. 3.7.2-19 (Sh 8) (SUNSI) • Fig. 3.7.2-19 (Sh 9, Sect. D-D and E-E) (SUNSI) 		Tier 1 Table 3.3-1

Table 2-1 Licensing Basis Changes

	Description of Proposed Change	Plant Specific Licensing Basis Change		
		UFSAR Tier 2	UFSAR Tier 2*	COL Appendix C (and Tier 1)
	c. Containment Filtration Room B (Room 40552) floor slab thickness changes	<ul style="list-style-type: none"> Fig. 3.7.2-19 (Sh 7) (SUNSI) 		Tier 1 Table 3.3-1
3	Annex Building Containment Filtration Room A height increase	<ul style="list-style-type: none"> Fig. 1.2-20 (SUNSI) Fig. 3.7.2-19 (Sh 4) (SUNSI) Fig. 3.7.2-19 (Sh 7) (SUNSI) Subsection 9.4.7.2.1 Fig. 9A-3 (Sh 3) (SUNSI) Fig. 12.3-1 (Sh 13) (SUNSI) Fig. 12.3-2 (Sh 13) (SUNSI) Fig. 12.3-3 (Sh 13) (SUNSI) 		Tier 1 Table 3.3-1
4	Consistency Tier 1 changes			
	a. Annex Building corridor wall between G and H between elevations 100'-0" and 117'-6"			Tier 1 Table 3.3-1
	b. Annex Building corridor wall between G and H between elevations 117'-6" and 135'-3"			Tier 1 Table 3.3-1
5	Plant-Specific Tier 1 editorial changes to Table 3.3-1			
	a. Entries for "Containment Filtration Rm A (North Wall)" and "Containment Filtration Rm A (East Wall)" from El. 135'-3" to 158'-0"			Tier 1 Table 3.3-1
	b. Entries for Annex Building "Floor" for El. 135'-3"			Tier 1 Table 3.3-1

3. TECHNICAL EVALUATION

The walls to be moved to make room for the new battery equipment room are not structural walls, thus the structural wall descriptions and analyses in the UFSAR are not affected by the proposed room layout revisions.

The proposed wall relocation adjacent to Corridor 40301 decreases the size of Fire Area 4031 AF 05. Therefore, the UFSAR Tier 2 Table 9A-3 fire loads analysis for Fire Area 4031 AF 05 is updated to address the decrease in floor area in this fire area and the fire loads associated with the new battery equipment room. (Note: the revised square footage for Fire Areas 4031 AF 05 and 4031 AF 06 in UFSAR Table 9A-3 also reflect changes to the dimensions of these fire areas associated with previous access control area modifications that were incorporated into the generic AP1000 DCD plant layout figures (general area, fire area figures, etc) prior to certification of Revision 19. The impacts to the floor areas in Table 9A-3 were not identified when the access control modifications were incorporated into DCD Revision 19, but are now reflected in the changes proposed by this LAR.) The updated Table 9A-3 fire loads analysis results for this area show that the fire durations remain well within (i.e., less than one hour) the two-hour fire boundary rating.

The proposed wall relocation increases the size of the Fire Area 4031 AF 06. Therefore, the UFSAR Table 9A-3 fire loads analysis for Fire Area 4031 AF 06 is updated for the increase in floor area. The updated Table 9A-3 fire loads analysis results for this area show that the fire durations remain well within (i.e., less than 1 hour) the two-hour fire boundary rating.

The proposed annex building El. 117'-6" floor slab thickness increases are currently reflected in the structural configuration of the annex building that was used to analyze the structure for safe shutdown earthquake (SSE) and other design loads and load combinations, thus the structural analysis is not adversely affected. The structural analysis description and results in the UFSAR are unchanged. As the proposed changes satisfy the design methods specified for Seismic Category I structures, the proposed changes do not adversely affect the Seismic Category II rating of this portion of the annex building. Because the proposed change increases the floor slab thicknesses, the radiation shielding function provided by these floors is not adversely affected.

The proposed Containment Filtration Room A (Room 40551) ceiling height increase, and resulting Containment Filtration Room B (Room 40552) floor elevation increase, is consistent with structural configuration of the annex building that was used to analyze the structure for SSE and other design loads and load combinations, thus the structural analysis is not affected. Fire Area 4052 AF 01 encompasses both Rooms 40551 and 40552. The volume of Room 40551 increases, and the volume of Room 40552 consequently decreases, but the floor areas for these rooms do not change and the total Fire Area 4052 AF 01 volume does not change. The fire loads analysis is based on combustible loads per square foot of floor area, which are not changed by the proposed room height changes. Therefore, the fire loads analysis is not affected. No radiation zone designation, shielding requirement, or radiological access control is affected. The floor elevation change is within the existing fire area, thus does not affect a fire area dimension, boundary, volume or function. Therefore, this proposed change does not constitute a Tier 2* information change.

As discussed in the Detailed Description (Section 2) above, the proposed consistency changes enhance the floor and wall descriptions and dimensions presented in Tier 1 Table 3.3-1 text such that they more accurately reflect the structures and layout depicted in the UFSAR design drawings, such as Figure 3.7.2-19. These changes reconcile inaccuracies introduced when translating the information portrayed in the design drawings to the text descriptions in the Tier 1 ITAAC table.

The annex building is not a seismic Category I building. Portions of the Annex Building are seismic Category II. The seismic Category II portions are designed so that an SSE could not cause unacceptable structural interaction or failure, and are analyzed using the same methods as specified for Seismic Category I structures. The UFSAR Section 3.7 seismic analyses are not affected by the relocation of the (non-structural) west wall between annex building Corridor 40301 and Rooms 40300 and 40302 and the modifications related to adding Room 40315. Therefore, the proposed changes do not adversely affect the seismic Category II rating of the annex building.

The proposed annex building changes do not affect the UFSAR Section 3.8, Design of Category I Structures, descriptions and analyses, nor do they affect the building's key design features credited in UFSAR Appendix 19F, Malevolent Aircraft Impact.

The proposed annex building changes do not involve a feature used for the prevention or mitigation of accidents or their safety / design analyses. The proposed changes neither involve nor interface with any SSC accident initiator or initiating sequence of events. The proposed changes do not involve any safety-related SSC or function used to mitigate an accident.

The proposed changes do not involve or indirectly affect safety-related equipment. Because the updated fire loading analysis demonstrates that the fire loads remain within their two-hour fire boundary rating, no nonsafety-related equipment that could be used to achieve safe shutdown in the event of a fire is affected. Therefore, the safe shutdown fire analysis is not affected.

The proposed annex building changes do not involve a change to a fission product barrier. The combustible material loads in the affected fire areas are not significantly changed, and the analyzed fire duration times remain within their two-hour design value, thus no fire load analysis is adversely affected. The proposed changes do not result in a new failure mode, malfunction or sequence of events that could affect safety. The proposed changes would not allow for a new fission product release path, result in a new fission product barrier failure mode, or create a new sequence of events that would result in significant fuel cladding failures.

The proposed annex building changes do not affect any safety-related equipment, design code limit, safety-related function, safety-related design analysis, safety analysis input or result, or design or safety margin. Therefore, no safety analysis or design basis acceptance limit or criterion would be challenged or exceeded.

The proposed editorial and consistency changes to Table 3.3-1 are included to provide a complete and accurate description of the annex building walls that is consistent with the depiction of the annex building layout currently provided in UFSAR Figure 3.7.2-19 (Sh 1

and 2) and to describe the these annex building structural elements in a manner that is consistent with other table entries. These editorial and consistency changes to Table 3.3-1 do not involve a design, function or analysis change. These changes support the translation of the information portrayed in the UFSAR figures to the text descriptions in the Tier 1 table.

The SSCs affected by this license amendment request are not used to contain, control, channel, monitor, process or release radioactive and non-radioactive materials. The types and quantities of expected effluents are not changed, and no effluent release path is affected by the proposed changes. Therefore, radioactive or non-radioactive material effluents are not affected by the proposed changes.

The thicknesses of certain annex building floors that provide radiation shielding are proposed to increase, but only for structural purposes. Their shielding function is not adversely affected. No radiation shielding requirement is changed. Plant radiation zones (as described in UFSAR Section 12.3), controls under 10 CFR Part 20, and expected amounts and types of radioactive materials are not affected by the proposed changes. Therefore, individual and cumulative radiation exposures do not change.

Physical Security Evaluation

A review of the proposed changes addressed in this LAR was conducted by Westinghouse and Licensee personnel familiar with current security regulations and industry practices in the security field and who possess design-specific knowledge of the AP1000 security systems. This review was accomplished by the reactor vendor and licensee through a multi-stepped design and licensing change process that considered: a) impact reviews of the design changes proposed on various program areas; b) licensing reviews and engineering reviews of the licensing change package incorporating the design changes; and c) additional focused program area reviews of design and licensing changes that are considered to have a potential impact on any licensee program area, such as physical security.

It was determined that certain aspects of the LAR (i.e. Annex Building floor thickness increase, Containment Air Filtration Room A height increase, and editorial clarifications to Tier 1 Table 3.3-1) would not change any building layout or structural element that could affect physical security. However, the proposed changes to annex building EI. 100'-0" to facilitate the use of Room 40315 as a battery equipment room were determined to have the potential for impact to the physical security program. During review of this aspect of the LAR, various security scenarios, based on potentially affected APP-GW-GLR-066, "AP1000 Safeguards Assessment Report," (also referred to as Technical Report [TR]-94) scenarios, were table-topped (a standard practice in which a scenario is time-stepped using expected adversary tactics and expected response force reactions) using the proposed layouts for the affected rooms and personnel pathways. While the proposed changes affect some of the scenario descriptions and drawings in TR-94, they do not affect the outcomes of the TR-94 scenarios. (Note: TR-94 is a Safeguards Information (SGI) document, and is not available to the public.)

Based on the review, it was determined that the proposed changes to annex building EI. 100'-0" to facilitate the use of Room 40315 as a battery equipment room do not affect the previously analyzed security timelines, strategies, or scenarios associated with the previous annex building configuration. The changes have no adverse effect on physical barriers

credited for adversary delays, ingress pathways to vital areas, or pathways (and associated timelines) utilized by security force personnel to respond to security response positions.

The proposed changes to annex building EI. 100'-0" to facilitate the use of Room 40315 as a battery equipment room do not create or change any Vital Area (VA) boundaries. Additionally, because the room configuration changes are internal to the annex building, there is no effect on external security features used for the detection of, assessment of, or response to a potential adversary action at the site Protected Area (PA) boundary.

The proposed changes to annex building EI. 100'-0" to facilitate the use of Room 40315 as a battery equipment room do not affect any perimeter walls acting as a security barrier and do not represent a negative impact to any other aspect of any AP1000 structure associated with physical security.

A review of the Physical Security Program was completed regarding the proposed changes to annex building EI. 100'-0" to facilitate the use of Room 40315 as a battery equipment room as identified in this license amendment request. (Note: The Physical Security Program includes the Physical Security Plan and other documents that are classified as Safeguards Information (SGI) and are not available to the public.) The review confirmed that the proposed changes do not adversely affect the Physical Security Program, because:

- The proposed changes have no effect on any physical barriers credited by the Physical Security Program for adversary delay.
- The proposed changes have no negative impact on ingress pathways to vital areas as described in the Physical Security Program.
- The proposed changes have no negative impact on security features associated with adversary interdiction as described in the Physical Security Program.
- The proposed changes do not result in the addition, deletion or relocation of security-related equipment associated with detection, assessment, or access control as described in the Physical Security Program.
- The proposed changes do not result in the addition, deletion or relocation of a security responder or response position as described in the Physical Security Program.
- The proposed changes have no effect on the pathways (or associated timelines) utilized by security force personnel to respond to security events or by Operations personnel and emergency responders to respond to emergency events related to plant operation.
- A revision to the Physical Security Plan (PSP) will not be required as the PSP does not describe the configuration of the annex building EI. 100'-0" to the level of detail associated with the proposed changes.

Similarly, a review of the Physical Security ITAAC was completed regarding the proposed changes to annex building EI. 100'-0" to facilitate the use of Room 40315 as a battery equipment room as identified in this license amendment request. As these changes do not

directly or indirectly impact any security equipment or systems utilized for detection, assessment, or access control, there is no impact on the Physical Security ITAAC.

In summary, the proposed changes to the annex building structure and layout, as identified in this license amendment request have been reviewed against security design and program documents. This review has determined that the changes have no negative impact on the Physical Security Program or the Physical Security ITAAC.

Summary

The proposed annex building reconfiguration and layout changes affect various UFSAR text, tables, and figures. The UFSAR figure changes require corresponding changes to plant-specific Tier 1 Table 3.3-1 and Figure 3.3-11A. In UFSAR Tier 2* Figure 9A-201, moving the common west (north-south) wall to annex building Rooms 40300 and 40302 by two feet affects part of the boundary between Fire Areas 4031 AF 05 and 4031 AF 06, thus this change constitutes a Tier 2* information change. This license amendment request describes and evaluates the UFSAR Tier 2 changes and the plant-specific Tier 1 and Tier 2* changes that are associated with those Tier 2 changes.

The proposed changes would not adversely affect any safety-related equipment or function, design function, radioactive material barrier or safety analysis.

4. REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 52.98(f) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a COL. This activity involves a change to COL Appendix C, and a corresponding departure from plant-specific Tier 1 information, Inspections, Tests, Analyses and Acceptance Criteria information; therefore, this activity requires an amendment to the COL. Accordingly, NRC approval is required prior to making the plant-specific changes in this license amendment request.

10 CFR 52, Appendix D, VIII.B.6.b(4) requires prior NRC approval for Tier 2* information departures. The proposed changes to the annex building layout affect a fire area boundary, which constitutes UFSAR Tier 2* information. Therefore, a license amendment request (LAR) (as supplied herein) is required.

10 CFR 52, Appendix D, Section VIII.B.5.a allows an applicant or licensee who references this appendix to depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2* information, or the Technical Specifications, or requires a license amendment under paragraphs B.5.b or B.5.c of the section. This change involves revisions to plant-specific Tier 1 information (and corresponding COL Appendix C information) and Tier 2* information, thus requires NRC approval for the Tier 1, Tier 2*, and associated Tier 2 departures.

10 CFR 50.48 requires a fire protection plan that satisfies 10 CFR 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.” Although this activity involves the relocation of a fire area boundary, it does not change the performance requirements for any fire boundary barriers. The proposed annex building changes necessitate an update to the fire loads analysis, but these changes do not adversely affect the fire protection analysis results; i.e., the affected fire loads remain within the design limits. Therefore, the proposed changes maintain compliance with GDC 3 and 10 CFR 50.48.

10 CFR 73.55(b) requires a licensee to establish and maintain a physical protection program which implements the Commission regulations including protection against the design basis threat of radiological sabotage as stated in 10 CFR 73.1. The proposed changes will be factored into the facility’s physical protection program, as applicable. Because the proposed changes do not adversely affect the Licensee’s ongoing efforts to establish and maintain a physical protection program for this facility, compliance with 10 CFR 73.55 is maintained.

4.2 Precedent

No precedent is identified.

4.3 Significant Hazards Consideration

The proposed changes would revise the Combined Licenses (COLs) by revising the annex building internal configuration to include an additional battery equipment room, moving a fire area wall, increasing the height of a room, and increasing certain floor thicknesses. The changes include reconfiguring existing rooms, and related room, wall, and access path changes.

The requested amendment involves changes to Updated Final Safety Analysis Report (UFSAR) information that include changes to Tier 2* information and result in changes to COL Appendix C, and corresponding changes to plant-specific Tier 1 information. This enclosure requests approval of the license amendment necessary to implement the Tier 2* and COL Appendix C changes, and the associated UFSAR Tier 2 changes.

An evaluation to determine whether or not a significant hazards consideration is involved with the requested 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 addition of a battery equipment room, room height increase, floor thickness changes, relocation of a non-structural internal wall and the associated wall, room and corridor changes within the annex building, do not adversely

affect the fire loading analysis durations of the affected fire zones and areas (i.e., the calculated fire durations remain less than their design values). Thus, the fire loads analysis is not adversely affected (i.e., analysis results remain acceptable). The safe shutdown fire analysis is not affected. The proposed changes do not involve any accident initiating event or component failure, thus the probabilities of the accidents previously evaluated are not affected. The rooms affected by the proposed changes do not contain or interface with safety-related equipment, thus the proposed changes would not affect any safety-related equipment or accident mitigating function. The radioactive material source terms and release paths used in the safety analyses are unchanged, thus the radiological releases in the accident analyses are not affected.

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 to the structure and layout of the annex building do not change fire barrier performance, and the fire loading analyses results remain acceptable. The room height and floor thickness changes are consistent with the annex building configuration currently used in the building's structural analysis. The relocated internal wall is non-structural, thus the structural analyses for the annex building are not affected. The affected rooms and associated equipment do not interface with components that contain radioactive material. The affected rooms do not contain equipment whose failure could initiate an accident. The proposed changes do not create a new fault or sequence of events that could result in a radioactive material release.

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

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

Response: No

The proposed changes to the structure and layout of the annex building do not change the fire barrier performance of the affected fire areas. The affected rooms do not contain safety-related equipment, and the safe shutdown fire analysis is not affected. The room height, floor thickness and wall changes do not affect the seismic Category II rating of the annex building.

The floor areas and amounts of combustible material loads in affected fire zones and areas do not significantly change, such that their fire duration times remain within their two-hour design value, thus the safety margins associated with the fire loads analysis are not affected.

No safety analysis or design basis acceptance limit/criterion is challenged or exceeded by the proposed changes, thus no margin of safety is reduced.

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 consideration 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

In conclusion, 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. Pursuant to 10 CFR 50.92, the requested change does not involve a Significant Hazards Consideration.

5. ENVIRONMENTAL CONSIDERATION

The proposed changes would revise the Combined Licenses (COLs) by revising the annex building internal configuration to include an additional battery equipment room, moving a fire area wall, increasing the height of a room, and increasing certain floor thicknesses. The changes include reconfiguring existing rooms, and related room, wall, and access path changes.

The requested amendment involves changes to Updated Final Safety Analysis Report (UFSAR) information, which involve changes to Tier 2* and COL Appendix C information. This enclosure requests approval of the license amendment necessary to implement the Tier 2* and COL Appendix C changes, and their associated UFSAR Tier 2 changes.

This review has determined the proposed change requires an amendment to the COL. However, a review of the anticipated construction and operational effects of the requested amendment has determined the requested 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 requested amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) the requested amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated; and (3) the requested amendment does not involve a

significant reduction in a margin of safety. Therefore, it is concluded that the requested 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 involves annex building floor thickness and layout changes. The proposed change is 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 change does 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 requested 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 requested floor thickness increases are only for structural purposes. The requested new battery equipment room, floor thickness increases, and annex building layout changes do not affect any equipment that could contain radioactive material. Plant radiation zones (addressed in UFSAR Section 12.3) are not affected, and controls under 10 CFR Part 20 preclude a significant increase in occupational radiation exposure. Therefore, the requested amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above review of the requested amendment, it has been determined that anticipated construction and operational effects of the requested amendment does 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 requested 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 exemption is not required.

6. REFERENCES

None

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4

ND-14-1257

Enclosure 2

Exemption Request
Annex Building Structure and Layout Changes
(LAR-13-038)

(8 pages, including this cover page)

1.0 PURPOSE

Southern Nuclear Operating Company (the Licensee) requests a permanent exemption from the provisions of 10 CFR 52, Appendix D, Section III.B, "Design Certification Rule for the AP1000 Design, Scope and Contents," to allow a departure from elements of the certification information in Tier 1 of the generic AP1000 Design Control Document (DCD). The regulation, 10 CFR 52, Appendix D, Section III.B, requires an applicant or licensee referencing Appendix D to 10 CFR Part 52 to incorporate by reference and comply with the requirements of Appendix D, including certified information in DCD Tier 1. Tier 1 includes ITAAC that must be satisfactorily performed prior to fuel load. The design details to be verified by these ITAAC are specified in the text, tables, and figures that are referenced in each individual ITAAC. The Tier 1 information for which a plant-specific departure and exemption is being requested includes non-system based design descriptions and other detailed information related to these design descriptions and the associated ITAAC, such as changes to concrete floor thicknesses, annex building wall location descriptions, and the interior configuration of the annex building.

This request for exemption will apply the requirements of 10 CFR 52, Appendix D, Section VIII.A.4 to allow changes to Tier 1 information due to the following proposed changes to the non-system based design descriptions and ITAAC figures and tables:

- Table 3.3-1, Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building: Revise the annex building information as follows:
 - Change the Column Line description for the "Corridor Wall between G and H" from "9 to 13" to "9 to near 13", and change the Floor Elevation Range upper range value from 135'-3" to 117'-6"
 - Insert an additional corridor wall line item for the "Corridor Wall between G and H" from Column Lines "9 to 13", at the Elevation Range From 117'-6" to 135'-3". The Concrete Thickness for this radiation shielding wall is 1'-6".
 - For the first "Floor" row at Elevation 135'-3", change the Column Line description from "2 to 4 from shield wall between E and F to column line H" to "From 2 to 4 and E to H", and change the Concrete Thickness from 0'-6" to 0'-8"
 - For the third "Floor" row, located between Column Lines 9 to 13 and E to I.1 at Elevation 117'-6", change the Concrete Thickness from 0'-6" to 0'-8"
 - Change the Wall Description for the "Containment Filtration Rm A (North Wall)" to "Containment Filtration Rms A and B (North Wall)"
 - Change the Wall Description for the "Containment Filtration Rm A (East Wall)" to "Containment Filtration Rms A and B (East Wall)"
 - Change the Floor Elevation Range upper range value for the "Containment Filtration Rm A (West Wall)" from 158'-0" to 150'-3"
 - Change the Floor Elevation for the "Containment Filtration Rm B (Floor)" from 146'-3" is changed to 150'-3", and the Concrete Thickness from 0'-6" to 0'-8"
 - Change the Floor Elevation Range lower range value for the "Containment Filtration Rm B (West wall)" lower elevation is changed from 146'-3" to 150'-3"
- Figure 3.3-11A, Annex Building Plan View at Elevation 100'-0" [sensitive unclassified non-safeguards information (SUNSI)] – Reconfigure the Security Area layout between Column Lines 11 and 13 and F and I.1 by:

- Reconfiguring the access corridor (Room 40301) to reduce the north-south portion of the corridor, and reconfigure the access corridor and security rooms (Rooms 40304 and 40305) to include the addition of new battery equipment room (Room 40315)
- Reducing the width of the north-south portion of the access corridor by two feet and increasing the east-west dimensions of the adjoining rooms (Rooms 40300 and 40302) to the east by two feet

This request will apply the requirements for granting exemptions from design certification information, as specified in 10 CFR Part 52, Appendix D, Section VIII.A.4, 10 CFR 52.63, §52.7, and §50.12.

2.0 BACKGROUND

The Licensee is the holder of Combined License Nos. NPF-91 and NPF-92, which authorize construction and operation of two Westinghouse Electric Company AP1000 nuclear plants, named Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively. A battery room on annex building Elevation (El.) 117'-6" is not large enough to house both the battery and the battery's associated equipment (e.g., chargers, inverters, etc.), thus a new (nonsafety-related) battery (i.e., direct current [DC]) equipment room is needed. As a result, the layout in annex building El. 100'-0" is to be modified to house this new battery equipment room. This activity requests exemption from the generic DCD Tier 1 descriptions, tables and figures that are involved with the plant-specific DCD Tier 2 departures, and which support the associated COL Appendix C ITAAC.

This activity requests exemption from elements of the AP1000 (Tier 1) design information to allow a departure from a figure and associated ITAAC for the annex building. The proposed departure would reconfigure the annex building to allow the addition of a battery equipment room, increase the thickness of certain annex building floors from six inches to eight inches, and revise descriptive information in Tier 1 Table 3.3-1 to more accurately reflect the wall and floor configuration depicted in UFSAR Tier 2 figures.

As discussed above, an exemption from elements of the AP1000 certified (Tier 1) design information is requested to allow plant-specific departures to be taken from non-system based design description and ITAAC Figures and Tables.

3.0 TECHNICAL JUSTIFICATION OF ACCEPTABILITY

An exemption is requested to depart from AP1000 generic Design Control Document (DCD) Tier 1 material by departing from the description of the annex building structures in Tier 1 Table 3.3-1, Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building, and departing from the annex building layout depicted in Tier 1 Figure 3.3-11A, Annex Building Plan View at Elevation 100'-0". The proposed changes are necessary to implement a reconfiguration of the annex building that includes the addition of a battery equipment room and relocation of a fire area wall, increase the slab thickness of certain floors in the annex building from 0'-6" to 0'-8", and increase the height of the Containment Filtration Room A ceiling. The proposed

changes do not adversely impact the ability of the annex building to support security, health physics, maintenance, or operations support functions. The structural changes do not adversely affect the seismic Category II rating of portions of the annex building, nor will they adversely affect the radiological shielding function performed by the annex building structural components. Furthermore, editorial changes to the wall and floor descriptions in Tier 1 Table 3.3-11A will provide the detail necessary to implement the corresponding Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC). Therefore, the annex building structure will continue to meet its required functionality following implementation of the proposed changes.

Detailed technical justification supporting this request for exemption is provided in Section 3 of the associated License Amendment Request in Enclosure 1 of this letter.

4.0 JUSTIFICATION OF EXEMPTION

10 CFR Part 52, Appendix D, Section VIII.A.4 and 10 CFR 52.63(b)(1) govern the issuance of exemptions from elements of the certified design information for AP1000 nuclear power plants. Because the Licensee has identified changes to the Tier 1 information related to the annex building's layout and structures as a result of design finalization activities, an exemption to the certified design information in Tier 1 is needed.

10 CFR Part 52, Appendix D, and 10 CFR 50.12, §52.7, and §52.63 state that the NRC may grant exemptions from the requirements of the regulations provided six 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)]; 4) special circumstances are present [§50.12(a)(2)(ii)]; 5) the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption [§52.63(b)(1)]; and 6) the design change will not result in a significant decrease in the level of safety [Part 52, App. D, VIII.A.1].

The requested exemption to change the configuration and layout of the annex building satisfies the criteria for granting specific exemptions, as described below.

1. This exemption is authorized by law

The NRC has authority under 10 CFR 52.63, §52.7, and §50.12 to grant exemptions from the requirements of NRC regulations. Specifically, 10 CFR 50.12 and §52.7 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 proposed exemption from the requirements of 10 CFR 52, Appendix D, Section III.B would allow changes to elements of the plant-specific Tier 1 DCD to depart from the AP1000 certified (Tier 1) design information. The plant-specific DCD Tier 1 will continue to reflect the approved licensing basis for VEGP Units 3 and 4, and will maintain a consistent level of detail with that which is currently provided elsewhere in Tier 1 of the DCD. Therefore, the affected plant-specific DCD Tier 1 ITAAC will continue to serve its required purpose.

The changes to annex building do not represent any adverse impact to their design functions or the systems, structures and components therein and will continue to protect the health and safety of the public in the same manner. The annex building changes do not introduce any new industrial, chemical, or radiological hazards that would represent a public health or safety risk, nor do they modify or remove any design or operational controls or safeguards intended to mitigate any existing on-site hazards. Furthermore, the proposed changes would not allow for a new fission product release path, result in a new fission product barrier failure mode, or create a new sequence of events that would result in fuel cladding failures. Accordingly, these changes do not present an undue risk from any existing or proposed equipment or systems.

Therefore, the requested exemption from 10 CFR 52, Appendix D, Section III.B 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 exemption from the requirements of 10 CFR 52, Appendix D, Section III.B would change elements of the annex building layout and structures as presented in the non-system based design descriptions and ITAAC figures and tables in the plant-specific DCD Tier 1, thereby departing from the AP1000 certified (Tier 1) design information. The proposed exemption will enable performance of the ITAAC associated with these changed elements, by reflecting the current design information in the text, tables, and figures that are referenced in these ITAAC. The exemption does not adversely impact the design, function, or operation of any plant SSCs associated with the facility's physical or cyber security, and therefore does not adversely affect any plant equipment that is necessary to maintain a safe and secure plant status. The proposed exemption has no adverse impact on plant security or safeguards.

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

4. Special circumstances are present

10 CFR 50.12(a)(2) lists six "special circumstances" for which an exemption may be granted. Pursuant to the regulation, it is necessary for one of these special circumstances to be present in order for the NRC to consider granting an exemption request. The requested exemption meets the special circumstances of 10 CFR 50.12(a)(2)(ii). That subsection defines special circumstances as 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."

The rule under consideration in this request for exemption is 10 CFR 52, Appendix D, Section III.B, which requires that a licensee referencing the AP1000 Design Certification Rule (10 CFR Part 52, Appendix D) shall incorporate by reference and comply with the requirements of Appendix D, including Tier 1 information. The VEGP Units 3 and 4 COLs reference the AP1000 Design Certification Rule and incorporate by reference the requirements of 10 CFR Part 52, Appendix D, including Tier 1 information. The underlying purpose of Appendix D, Section III.B is to describe and define the scope and contents of the AP1000 design certification, and to require compliance with the design certification information in Appendix D.

Changes are being made to reconfigure the annex building security area to add a battery equipment room and relocate a fire wall resulting in narrowing a corridor, increase a containment ventilation room ceiling height, increase certain floor slab thicknesses, and enhance the accuracy of details presented in a Tier 1 ITAAC table.

The security area reconfiguration is proposed to add a battery equipment room to house the equipment necessary to support the nonsafety-related batteries housed in a separate annex building location that does not have sufficient room to house the support equipment. The containment ventilation room ceiling height increase is proposed to accommodate the as-designed size of equipment and provide adequate space for access and maintenance. The concrete floor slab thickness is proposed to be increased to 8" for certain areas to support the applied loads in the final structural design analyses. The editorial changes to the Tier 1 ITAAC table are proposed to more accurately describe the wall and floor locations and key parameters, as depicted in the current design drawings and UFSAR Figure 3.7.2-19 (Sh 1 and 2). These changes have been evaluated and confirmed to support the conclusions of the structural design analyses, radiation shielding analyses, and security evaluations.

Based on the above, each of the requested changes will facilitate plant construction and maintain or enhance future safe plant operation, security, and maintenance, while maintaining the current seismic design rating and providing the radiation shielding necessary to maintain radiation doses As Low As is Reasonably Achievable (ALARA). Accordingly, this change to the certified information will enable the licensee to safely construct, maintain, and operate the AP1000 facility consistent with the design certified by the NRC in 10 CFR Part 52, Appendix D.

Therefore, special circumstances are present, because application of the current generic certified design information in Tier 1 as required by 10 CFR Part 52, Appendix D, Section III.B, in the particular circumstances discussed in this request is not necessary to achieve the underlying purpose of the rule.

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

The exemption from the requirements of 10 CFR 52, Appendix D, Section III.B would change elements of the plant-specific DCD Tier 1 by departing from standard AP1000 certified (Tier 1) design information. This exemption would allow a change to a non-system based ITAAC figure and table. Based on the nature of the proposed changes to the generic Tier 1 information and the understanding that these changes were identified during the design finalization process for the AP1000, it is expected that this exemption will be requested by other AP1000 licensees and applicants. However, even if other AP1000 licensees and applicants do not request this same departure, the

special circumstances will continue to outweigh any decrease in safety from the reduction in standardization because the key design functions of the annex building structure associated with this request will continue to be maintained. Furthermore, the justification provided in the license amendment request and this exemption request and the associated mark-ups demonstrate that there is a limited change from the standard information provided in the generic AP1000 DCD, which is offset by the special circumstances identified above.

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 proposed exemption would allow changes to the annex building structure and layout as presented in a non-system based ITAAC figure and table. The level of safety presented by plant structures is defined by the ability of the structures to protect the SSCs contained within these structures from hazards and to minimize the propagation of damage resulting from postulated events to the degree practical.

As a result of the limited-scope and nature of the proposed changes associated with this exemption request, no systems or equipment will be adversely impacted such that there are new failure modes introduced by these changes and the level of safety provided by the current annex building and the systems and equipment contained therein will be maintained.

Because the proposed changes to the annex building structure and layout will not adversely affect the ability of this building to perform its design functions and the level of safety provided by the annex building and the systems and equipment contained therein is unchanged, it is concluded that the design change associated with the proposed exemption will not result in a significant decrease in the level of safety.

5.0 RISK ASSESSMENT

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

6.0 PRECEDENT EXEMPTIONS

None identified.

7.0 ENVIRONMENTAL CONSIDERATION

The Licensee requests a departure from elements of the certified information in Tier 1 of the generic AP1000 DCD. The Licensee has determined that the proposed departure would require a permanent exemption from the requirements of 10 CFR 52, Appendix D, Section III.B, "Design Certification Rule for the AP1000 Design, Scope and Contents" with respect to installation or use of facility components located within the restricted area, as defined in 10 CFR Part 20, or which changes an inspection or a surveillance requirement; however, the Licensee evaluation of the proposed exemption has

determined that the proposed exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.25(c)(9).

Based on the above review of the proposed exemption, the Licensee has determined that the proposed activity does 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 exemption 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 exemption is not required.

Specific details of the environmental considerations supporting this request for exemption are provided in Section 5 of the associated License Amendment Request provided in Enclosure 1 of this letter.

8.0 CONCLUSION

The Licensee requests a permanent exemption for elements of AP1000 design certification information reflected in Tier 1. The proposed changes to Tier 1 are necessary to revise a non-system based design description and ITAAC figure and table in the plant-specific DCD Tier 1 to reflect proposed plant-specific design. The proposed exemption would allow departure from AP1000 generic Tier 1 DCD information by reconfiguring the annex building security area to add a battery equipment room and relocate a fire wall resulting in narrowing a corridor, increasing a containment ventilation room ceiling height, increasing certain floor slab thicknesses, and enhancing the accuracy of details presented in a Tier 1 ITAAC table. The exemption request meets the requirements of 10 CFR 52.63, "Finality of design certifications," 10 CFR 52.7, "Specific exemptions," 10 CFR 50.12, "Specific exemptions," and 10 CFR 52 Appendix D, "Design Certification Rule for the AP1000." 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, approval of this request does not result in a significant decrease in the level of safety, satisfies the underlying purpose of the AP1000 Design Certification Rule, and does not present a significant decrease in safety as a result of a reduction in standardization.

9.0 REFERENCES

None

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4

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Enclosure 3

Proposed Changes to the Licensing Basis Documents (Publicly Available Information)
(LAR-13-038)

(5 pages, including this cover page)

Tier 1 (and COL Appendix C) Table 3.3-1, Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building

Table 3.3-1 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building⁽¹⁾				
Wall or Section Description	Column Lines ⁽⁷⁾	Floor Elevation or Elevation Range ⁽⁷⁾⁽⁸⁾	Concrete Thickness ⁽²⁾⁽³⁾⁽⁴⁾⁽⁵⁾⁽⁹⁾	Applicable Radiation Shielding Wall (Yes/No)
Annex Building				
* * *				
Corridor Wall between G and H	From 9 to <u>near 13</u>	From 100'-0" to 135'-3" <u>117'-6"</u>	1'-6"	Yes
<u>Corridor Wall between G and H</u>	<u>From 9 to 13</u>	<u>From 117'-6" to 135'-3"</u>	<u>1'-6"</u>	<u>Yes</u>
Column Line 9 wall	From E to H	From 117'-6" to 158'-0"	2'-0"	Yes
Floor	2 to 4 from shield wall between E and F to column line H <u>From 2 to 4 and E to H</u>	135'-3"	0'-6" <u>0'-8"</u>	Yes
Floor	From 4 to 4.1 and E to H	135'-3"	1'-0"	Yes
Floor	From 9 to 13 and E to I.1	117'-6"	0'-6" <u>0'-8"</u>	Yes
Floor	From 9 to 13 and E to I.1	135'-3"	0'-8"	Yes
Containment Filtration Rm A <u>Rms A and B</u> (North Wall)	Between column line E to H	From 135'-3" to 158'-0"	1'-0"	Yes
Containment Filtration Rm A <u>Rms A and B</u> (East wall)	Between column line E to F	From 135'-3" to 158'-0"	1'-0"	Yes
Containment Filtration Rm A (West wall)	Between column line G to H	From 135'-3" to 158'-0" <u>150'-3"</u>	1'-0"	Yes
Containment Filtration Rm A (Floor)	Between column line E to H	135'-3"	1'-0"	Yes
Containment Filtration Rm B (Floor)	Between column line E to H	146'-3" <u>150'-3"</u>	0'-6" <u>0'-8"</u>	Yes
Containment Filtration Rm B (West wall)	Between column line G to H	From 146'-3" <u>150'-3"</u> to 158'-0"	1'-0"	Yes
* * *				

UFSAR Section 9.4, Subsection 9.4.7.2.1, General Description

Revise Tier 2 information by changing the elevation in the second paragraph, first sentence, as shown in the excerpt below:

The exhaust air filtration units are located within the radiologically controlled area of the annex building at elevation 135'-3" and ~~146'-3"~~ 150'-3". The filtration units are connected to a ducted system with isolation dampers to provide HEPA filtration and charcoal adsorption of exhaust air from the containment, fuel handling area, auxiliary and annex buildings. A gaseous radiation monitor is located downstream of the exhaust air filtration units in the common ductwork to provide an alarm if abnormal gaseous releases are detected. The plant vent exhaust flow is monitored for gaseous, particulate and iodine releases to the environment. During containment purge, the exhaust air filtration units satisfy 10 CFR 50 Appendix I guidelines (Reference 20) for offsite releases and meets 10 CFR 20 (Reference 21) allowable effluent concentration limits when combined with gaseous releases from other sources. During conditions of abnormal airborne radioactivity in the fuel handling area, auxiliary and/or annex buildings, the filtration units provide filtered exhaust to minimize unfiltered offsite releases.

UFSAR Appendix 9A, Subsection 9A.3.4.9, Fire Area 4031 AF 05

Revise Tier 2 information by adding a new line item for Fire Zone 4031 AF 40300 with Room No. 40315, Security Room, as shown in the excerpt below:

This fire area is subdivided into the following fire zones:

<u>Fire Zone</u>	<u>Room No.</u>	
• 4031 AF 40300	40301	Access Corridor
• 4031 AF 40300	40305	Security Room
• <u>4031 AF 40300</u>	<u>40315</u>	<u>Security Room</u>
• 4031 AF 40303	40303	Corridor
• 4031 AF 40303	40304	Restroom

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Enclosure 3

Proposed Changes to the Licensing Basis Documents (LAR-13-038) (Publicly Available Information)

UFSAR Appendix 9A, Table 9A-3, Fire Protection Summary

Revise Tier 2 information by:

- Changing combustible data, floor areas, equivalent durations, and totals in Fire Area 4031 AF 05
- Changing the total floor area, combustible load and equivalent duration in Fire Area 4031 AF 06

as shown in the table excerpt below:

(NOTE: New values are shown in blue underlined font directly above the current deleted text shown in red strike-through font.):

Fire Area/Zone ⁽¹⁾	Safety Area? ⁽²⁾	Floor Area Sq Ft	Combust. Material ⁽³⁾	Fire Sev. Cat.	Amount	Heat Value (Btu)	Comb. Load, Btu/Sq Ft	Equiv. Dur. (Min)	Boundary Fire Res. ⁽⁴⁾ (Hours)	Detect. Cap.	Fixed Suppression Capability ⁽⁵⁾
* * *											
4031 AF 05	NO								2/0	SMOKE	HOSE STATION
4031 AF 40300 SECURITY ACCESS, CONTROL AREA			CABLE INS	C	<u>2000</u> 1000	<u>2.0E+07</u> 1.0E+07					
			PAPER	C	<u>1300</u> 1200	<u>1.0E+07</u> 9.2E+06					
			PLASTIC	D	500	6.6E+06					
			WOOD	C	500	4.2E+06					
			CLOTH	B	<u>250</u> 200	<u>2.0E+06</u> 1.6E+06					
		<u>1575</u> 1920	NET CAT.	D	TOTAL::	<u>4.3E+07</u> 3.2E+07	<u>27000</u> 17000	<u>21</u> 12			
* * *											
4031 AF 40303 CORRIDOR AND RESTROOM			CABLE INS	C	2000	2.0E+07				SMOKE	HOSE STATION
			PAPER	C	1000	7.7E+06					
			PLASTIC	D	500	6.6E+06					
			WOOD	C	500	4.2E+06					
			CLOTH	B	500	4.0E+06					
		<u>1220</u> 1600	NET CAT.	D	TOTAL::	4.3E+07	<u>35000</u> 27000	<u>27</u> 20			
FIRE AREA TOTAL:		<u>2795</u> 3520	NET CAT.	D	TOTAL:	<u>8.6E+07</u> 7.5E+07	<u>31000</u> 24000	<u>24</u> 16			
* * *											
4031 AF 06	NO									SMOKE	HOSE STATION
SECURITY AREA			CABLE INS	C	1075	1.1E+07					
			PAPER	C	200	1.5E+06					
			PLASTIC	D	175	2.3E+06					
			WOOD	C	500	4.2E+06					
			CLOTH	B	100	8.0E+05					
			TRASH	B	20	1.5E+05					
FIRE AREA TOTAL:		<u>1115</u> 640	NET CAT.	D	TOTAL:	2.0E+07	<u>18000</u> 34000	<u>14</u> 23			

**The following UFSAR figures are Withheld from Public Disclosure
(See Enclosure 4 for markups to these figures)**

- **COL Appendix C (Tier 1) Figure 3.3-11A, Annex Building Plan View at Elevation 100'-0"**
- **UFSAR Section 1.2, Tier 2 Figure 1.2-201, Annex Building General Arrangement Plan at Elevation 100'-0" & 107'-2"**
- **UFSAR Section 1.2, Tier 2 Figure 1.2-20, Annex Building General Arrangement Plan at Elevation 135'-3", 156'-0" & 158'-0"**
- **UFSAR Section 3.7, Tier 2 Figure 3.7.2-19 (Sheet 1 of 10), Annex Building Key Structural Dimensions Plan at Elevation 100'-0"**
- **UFSAR Section 3.7, Tier 2 Figure 3.7.2-19 (Sheet 4 of 10), Annex Building Key Structural Dimensions Plan at Elevation 158'-0" & 146'-3"**
- **UFSAR Section 3.7, Tier 2 Figure 3.7.2-19 (Sheet 7 of 10), Annex Building Key Structural Dimensions Section B-B"**
- **UFSAR Section 3.7, Tier 2 Figure 3.7.2-19 (Sheet 8 of 10), Annex Building Key Structural Dimensions Section C-C"**
- **UFSAR Section 3.7, Tier 2 Figure 3.7.2-19 (Sheet 9 of 10), Annex Building Key Structural Dimensions Sections D-D, E-E, & F-F"**
- **UFSAR Section 3.7, Tier 2 Figure 3.7.2-19 (Sheet 10 of 10), Annex Building Key Structural Dimensions Sections G-G, H-H, & J-J"**
- **UFSAR Appendix 9A, Tier 2* Figure 9A-201, [Annex I & II Building Fire Areas Plan at Elevations 100'-0" & 107'-2"]***
- **UFSAR Appendix 9A, Tier 2* Figure 9A-3 (Sheet 3 of 3), [Annex I & II Building Fire Areas Plan at Elevation 135'-3"]***
- **UFSAR Section 12.3, Tier 2 Figure 12.3-201, Radiation Zones, Normal Operations / Shutdown Annex Building, Elevation 100'-0" & 107'-2"**
- **UFSAR Section 12.3, Tier 2 Figure 12.3-1 (Sheet 13 of 16), Radiation Zones, Normal Operations / Shutdown Annex Building, Elevation 135'-3", 146'-3", 156'-0" & 158'-0"**
- **UFSAR Section 12.3, Tier 2 Figure 12.3-202, Radiation Zones, Post-Accident, Annex Building, Elevation 100'-0" & 107'-2"**
- **UFSAR Section 12.3, Tier 2 Figure 12.3-2 (Sheet 13 of 15), Radiation Zones, Post-Accident, Annex Building, Elevation 135'-3", 146'-3", 156'-0" & 158'-0"**
- **UFSAR Section 12.3, Tier 2 Figure 12.3-203, Radiological Access Controls, Normal Operations / Shutdown Annex Building, Elevation 100'-0" & 107'-2"**
- **UFSAR Section 12.3, Tier 2 Figure 12.3-3 (Sheet 13 of 16), Radiological Access Controls, Normal Operations / Shutdown Annex Building, Elevation 135'-3", 146'-3", 156'-0" & 158'-0"**