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ND-12-1486
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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Request for License Amendment and Exemption:
Changes to the Structures and Layout of the Turbine Building (LAR-12-006)

Ladies and Gentlemen:

In accordance with the provisions of 10 CFR 50.90, Southern Nuclear Operating Company (SNC) hereby requests an amendment to the combined licenses (COLs) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 (License Nos. NPF-91 and NPF-92, respectively). This amendment request proposes to depart from approved Design Control Document (DCD) Tier 2 material that has been previously incorporated into the VEGP Units 3 and 4 Updated Final Safety Analysis Report (UFSAR) and the associated certified Tier 1 material that is involved with this Tier 2 material and to revise the associated material that has been included in Appendix C of each COL. Therefore, in accordance with 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 Tier 1 material departures.

The requested departures are necessary to reflect the evolution and advancement of systems and building design identified during design finalization of the Turbine Building. The proposed departures include changes to Turbine Building layout details and Turbine Building elevations and associated wall thicknesses. The description, technical evaluation, and regulatory evaluation (including the Significant Hazards Consideration determination) for the proposed changes are contained in Enclosure 1. The background and supporting basis for the requested exemption are contained in Enclosure 2. The proposed markups depicting the requested changes to the plant-specific DCD and COLs and the UFSAR text, tables, and figures that are available for disclosure to the public are contained in Enclosure 3. Markups of the plant-specific DCD and COLs and the UFSAR text, tables, and figures that are withheld from public disclosure in accordance with 10 CFR 2.390(d) are provided in Enclosure 4. Figures comparing the floor response spectra at the three locations of interest to the generic AP1000 envelope are provided in Enclosure 5. This letter contains no regulatory commitments.

SNC requests staff approval of the license amendment and exemption by [***DATE***] to support [***Provide basis for requested approval date***] Delayed approval of this license amendment

would result in a delay of this 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 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. Wesley A. Sparkman at (205) 992-5061.

Mr. C. R. Pierce states that he is the Regulatory Affairs Director of Southern Nuclear Operating Company, 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

C. R. Pierce

CRP/NH/dmw

Sworn to and subscribed before me this _____ day of _____, 2012

Notary Public: _____

My commission expires: _____

Enclosure 1: Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Request for License Amendment Regarding Changes to the Structures and Layout of the Turbine Building (LAR-12-006)

Enclosure 2: Vogtle Electric Generating Plant (VEGP) Units 3 and 4 - Exemption Request Regarding Changes to the Structures and Layout of the Turbine Building

Enclosure 3: Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Licensing Basis Documents – Proposed Changes (Publicly Available Information) (LAR-12-006)

Enclosure 4: Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Licensing Basis Documents – Proposed Changes (Withheld Information) (LAR-12-006)

Enclosure 5: Vogtle Electric Generating Plant (VEGP) Units 3 and 4 - Floor Response Spectra Associated with Request for License Amendment regarding Changes to the Structures and Layout of the Turbine Building (LAR-12-006)

cc: To be provided by SNC ND Licensing Admin

Southern Nuclear Operating Company

ND-12-1486

Enclosure 1

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Request for License Amendment
Regarding Changes to the Structures and Layout of the Turbine Building
(LAR-12-006)

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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.

SNC requests staff approval of the license amendment by [**_DATE_**] to support [**_Provide basis for requested approval date_**]. Delayed approval of this license amendment would result in a delay of this construction activity and subsequent dependent construction activities.

1. Summary Description

The proposed changes would revise the COLs in regard to the AP1000 Turbine Building structures and layout by: (1) changing the door location on the motor-driven fire pump room in the Turbine Building, (2) clarifying the column line designations for the southwest and southeast walls of the Turbine Building first bay, (3) changing the floor to ceiling heights at three different elevations in the Turbine Building main area, and (4) increasing elevations and wall thickness in certain walls of the Turbine Building first Bay. This activity involves departures from VEGP Units 3 and 4 Updated Final Safety Analysis Report (UFSAR) Figures 1.2-23, 1.2-24, 1.2-25, 1.2-26, 1.2-27, 1.2-28, 1.2-29, 1.2-30, 9A-2 (Sheets 1, 2, 3, 4, and 5), 12.3-1 (Sheets 15 and 16), 12.3-2 (Sheet 15), 12.3-3 (Sheets 15 and 16), Tier 2 Tables 3.2-2 and 9A-3, and Tier 2 Sections 3.7.2, 9.4.9, and 9A.3. Associated departures from plant-specific Design Control Document (DCD) Tier 1 Table 3.3-1 and Figure 3.3-11B are requested by this License Amendment Request. The departure from the plant-specific DCD Tier 1 information also involves similar changes to the VEGP Units 3 and 4 COLs, Appendix C, Table 3.3-1 and Figure 3.3-11B.

2. Detailed Description

Turbine Building layout changes

An intermediate column currently located at the intersection of P.2 and 19.1 on the Turbine Building plan view figure interferes with the layout and maintenance space of Switchgear Room #2 (room 20501 at El. 141'-3"). To resolve this interference, the column is relocated to column lines P.1 and 19.1. This change requires the doorway in the southeast corner of the Motor-Driven Fire Pump room (room 20303) at El. 100'-0" to be relocated from the south wall to the east wall to clear the revised footprint of the intermediate column.

Additionally, column lines 11.05 and 11.1, as currently depicted in the UFSAR figures, do not clearly reflect the dimensions of the first bay south walls. The southeast wall (between column lines I.1 and K.4) and the southwest wall (between column lines Q and R) are not collinear, so they need to be assigned different column line designations to clearly indicate their relative locations. Unless the walls are identified with different column line designations, it will not be possible to accurately dimension the centerline of both the southwest and southeast walls in the Turbine Building. Therefore, a new column line 11.02 is added to indicate the centerline of the first bay southwest wall. The existing column line 11.05 is used to indicate the centerline of the first bay southeast wall. This activity clarifies the column designation of the first bay southeast and southwest walls only, and does not make any physical design changes or modify any structures, systems, or components (SSCs).

The plant-specific DCD departures are described below. Figures that contain Sensitive Unclassified Non-Safeguards Information (SUNSI) are identified as such. NRC approval of changes to Tier 2* Figure 9A-2 (Sheets 1 through 5) is requested due to changes to Tier 2 information in these figures that involves a departure from Tier 1 information.

Tier 2 Departure:

- UFSAR Figure 1.2-23 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. The doorway in the southeast corner of the room 20303 is relocated from the south wall to the east wall.
- UFSAR Figure 1.2-24 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall.
- UFSAR Figure 1.2-25 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall.
- UFSAR Figure 1.2-26 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added and two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure.
- UFSAR Figure 1.2-27 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added and two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure.
- UFSAR Figure 1.2-28 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added and two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure.
- UFSAR Figure 1.2-30 (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall.
- UFSAR Table 3.2-2 – The seismic category II description is changed to account for the new column line 11.02.
- UFSAR Figure 9A-2 (Sheet 1) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. The doorway in the southeast corner of room 20303 is relocated from the south wall to the east wall. (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 9A-2 (Sheet 2) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications

(11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)

- UFSAR Figure 9A-2 (Sheet 3) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 9A-2 (Sheet 4) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added and two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure. (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 9A-2 (Sheet 5) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added and two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure. (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 12.3-1 (Sheet 15) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. The doorway in the southeast corner of room 20303 is relocated from the south wall to the east wall.
- UFSAR Figure 12.3-1 (Sheet 16) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall.
- UFSAR Figure 12.3-2 (Sheet 15) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. The doorway in the southeast corner of room 20303 is relocated from the south wall to the east wall.
- UFSAR Figure 12.3-3 (Sheet 15) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. The doorway in the southeast corner of room 20303 is relocated from the south wall to the east wall.
- UFSAR Figure 12.3-3 (Sheet 16) (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall.

Associated Tier 1 Departure:

- Table 3.3-1 – A new column line 11.02 is added to indicate the centerline of the first bay southwest wall. The existing column line 11.05 is used to indicate the centerline of the first bay southeast wall. (This Tier 1 departure also involves a proposed amendment to COL Appendix C, Table 3.3-1.)
- Figure 3.3-11B (SUNSI) – A new column line 11.02 (indicating the centerline of the first bay southwest wall) is added, two column line identifications (11 and 11.05) are moved from the top to the bottom of that figure, and 11.05 is changed to indicate the centerline of the first bay southeast wall. The doorway in the southeast corner of the room 20303 is relocated from the south wall to the east wall. (This Tier 1 departure also involves a proposed amendment to COL Appendix C, Figure 3.3-11B.)

Main area elevation changes and first bay wall height and thickness changes

The current Turbine Building plan and elevation views shown in the figures in Sections 1.2, 9A, and 12.3 of the VEGP Units 3 and 4 UFSAR identify floor locations at Elevations 117'-6", 135'-3", and 161'-0" for the Turbine Building main area. Additional height is proposed at these three levels to facilitate installation of piping, pipe supports, supplemental steel, and other commodities and equipment. This additional height will also provide access space for construction, operation, and maintenance activities.

The proposed change would add 3 feet of floor-to-ceiling height at each of these three elevations, which would increase the floor elevations from 117'-6" to 120'-6", from 135'-3" to 141'-3", and from 161'-0" to 170'-0". The proposed changes in the heights at these three elevations would only apply to the Turbine Building main area. The Turbine Building first bay, which abuts the main area, would maintain the existing heights at those three elevations because of access constraints between the Turbine Building first bay and the Auxiliary and Annex Buildings. Because of the mismatch in heights at the three elevations between the Turbine Building first bay and Main Area as a result of this change, an interference is created to existing vents in the first bay Line 11.2 wall at Elevations 117'-6" and 135'-3" due to relocated floor beams in the main area. To compensate for this blocked vent area, additional vent area in the first bay is needed. In response to this need, the height of the first bay walls would be increased by 8 feet by changing the elevation of the top of the first bay walls from 161'-0" to 169'-0". This additional height allows space for installation of blowout panels to compensate for the blocked vents by providing the necessary additional venting of the first bay in the event of a double-ended guillotine break in a main steam pipe. The additional vent area provided by these blowout panels would be at least 10 percent greater than the vent area that would be blocked by the relocated main area floor beams. As a result of the increased height of the first bay walls, the width of the first bay east and west walls must be increased to meet existing structural codes and standards and maintain the seismic Category II rating for the first bay. The width of the first bay east and west walls would therefore be increased from 2 feet to 3 feet.

The plant-specific DCD departures are described below. Figures that contain SUNSI are identified as such. NRC approval of changes to Tier 2* Figure 9A-2 (Sheets 2 through 5) is requested due to changes to Tier 2 information in these figures that involves a departure from Tier 1 information.

Tier 2 Departure:

- UFSAR Figure 1.2-24 (SUNSI) – This figure is changed to identify the first bay elevation as 117'-6" and revise the elevation of the main area from 117'-6" to 120'-6". The title of this figure is changed to identify it as the Plan at 120'-6".
- UFSAR Figure 1.2-25 (SUNSI) – This figure is changed to identify the first bay elevation as 135'-3" and revise the partial plan floor elevation from 149'-0" to 158'-7". The title of this figure is changed to identify it as the Plan at 141'-3".
- UFSAR Figure 1.2-26 (SUNSI) – This figure is changed to identify the first bay elevation as 169'-0". The title of this figure is changed to identify it as the Plan at 170'-0".
- UFSAR Figure 1.2-27 (SUNSI) – This figure is changed to identify the first bay elevation as 169'-0". The title of this figure is changed to identify it as the Plan at 170'-0".
- UFSAR Figure 1.2-28 (SUNSI) – This figure is changed to identify the first bay elevation as 169'-0". The title of this figure is changed to identify it as the Roof Plan at 255'-3".
- UFSAR Figure 1.2-29 (SUNSI) – This figure is changed to revise elevation 117'-6" to 120'-6", 135'-3" to 141'-3", 161'-0" to 170'-0", and 187'-3" to 196'-3".
- UFSAR Figure 1.2-30 (SUNSI) – This figure is changed to add elevation 168'-3"/169'-0" to depict height of first bay roof, to revise the top of rail height from 218'-5" to 223'-5", to revise the Turbine Building roof elevation from 246'-3"/245'-0" to 255'-3"/254'-0", and to add floor elevation designations at 120'-6", 141'-3", and 170'-0" for the Operating Deck.
- UFSAR Section 3.7.2.8.3 – Changed height of reinforced concrete wall between Turbine Building and first bay from 161'-0" to 169'-0".
- UFSAR Section 9.4.9.2.1.1 – Changed elevation that identifies the location of wall louvers from 117'-6" to 120'-6" and 135'-3" to 141'-3".
- UFSAR Section 9.4.9.2.1.2 – Changed elevation that identifies the location of air handling units from 149'-0" to 158'-7". Changed elevation that identifies the location of the secondary sampling laboratory and office space from 149' to 158'-7" and 174' to 183'.
- UFSAR Section 9A.3.2.1 –
  - Changed fire zone 2040 AF 20400 elevation from 117'-6" to 120'-6".
  - Changed fire zone 2050 AF 20500 elevation from 135'-3" to 141'-3".
  - Changed fire zone 2053 AF 20506 elevation from 149'-0" to 158'-7".
  - Changed fire zone 2060 AF 20600 elevation from 161'-0" to 170'-0".
  - Changed fire zone 2063 AF 20602 elevation from 175'-1 1/2" to 183'-1 1/2".
  - Changed elevation that identifies the location of start-up feedwater pumps and motor control centers (MCCs) and control equipment from 135'-3" to 141'-3".

- UFSAR Section 9A.3.2.4 – Changed the elevation description for the elevator service from 161'-0" to 170'-0". Change the elevation description of the elevator machine room from 171'-0" to 196'- 3".
- UFSAR Section 9A.3.2.7 – Change the lower elevation description for the S03 stairwell from 149'-0" to 158'-7". Change the upper elevation description for the S03 stairwell from 187'-3" to 196'-3".
- UFSAR Table 9A-3 –
  - Changed fire zone 2040 AF 20400 elevation from 117'-6" to 120'-6".
  - Changed fire zone 2050 AF 20500 elevation from 135'-3" to 141'-3".
  - Changed fire zone 2053 AF 20506 elevation from 149'-0" to 158'-7".
  - Changed fire zone 2060 AF 20600 elevation from 161'-0" to 170'-0".
- UFSAR Figure 9A-2 (sheet 2) (SUNSI) – Changed to identify elevation 117'-6" for the first bay and change the elevation of the main area from 117'-6" to 120'-6". The title of this figure is changed to identify it as the Plan at 120'-6". (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 9A-2 (sheet 3) (SUNSI) – Changed to identify elevation 135'-3" for the first bay and change the elevation of the main area from 135'-3" to 141'-3". Changed partial plan elevation in NW corner from 149'-0" to 158'-7". The title of this figure is changed to identify it as the Plan at 141'-3". (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 9A-2 (sheet 4) (SUNSI) – Changed to identify elevation 169'-0" for the first bay. Changed elevations from 161'-0" to 170'-0" and from 187'-3" to 196'-3". The title of this figure is changed to identify it as the Plan at 170'-0". (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 9A-2 (sheet 5) (SUNSI) – Changed to identify elevation 169'-0" for the first bay. Changed elevation and from 245'-0"/226'-0" to 255'-3". The title of this figure is changed to identify it as the Plan at 255'-3". (This change affects Tier 2 information that involves a departure from Tier 1. Tier 2* information is not affected.)
- UFSAR Figure 12.3-1 (sheet 16) (SUNSI) – Changed elevation from 117'-6" to 120'-6". Changed to identify elevation 117'-6" for the first bay. Changed Zone 1 elevations in General Drawing Note 2 from 135'-3" to 141'-3" and 161'-0" to 170'-0".
- UFSAR Figure 12.3-3 (sheet 16) (SUNSI) – Changed elevation from 117'-6" to 120'-6". Changed to identify elevation 117'-6" for the first bay. Changed Zone 1 elevations in General Drawing Note 2 from 135'-3" to 141'-3" and 161'-0" to 170'-0".

Associated Tier 1 Departure:

- Table 3.3-1 - The concrete thickness of Turbine Building "Wall adjacent to Column Line I.2" and "Wall adjacent to Column Line R" is increased from 2 feet to 3 feet. The maximum elevation of the top of the first bay walls is increased from 161'-0" to 169'-0". (This Tier 1 departure also involves a proposed amendment to COL Appendix C, Table 3.3-1.)

3. Technical Evaluation

Turbine Building layout changes

The doorway in the southeast corner of the FPS Motor Driven Fire Pump room (room 20303) on El. 100'-0" will be relocated from the south wall to the east wall to clear the footprint of the intermediate column being relocated to the intersection of column lines P.1 and 19.1. The design function of room 20303 is to provide a separate fire area for the motor-driven fire pump, FPS-MP-01A. The double doorway in the southeast corner of room 20303 allows for the movement of equipment and material between the Turbine Building El. 100'-0" and room 20303, and provides one of two egress pathways out of room 20303. The design function of the doors is to form part of the 3-hour fire barrier between fire areas associated with the Turbine Building El. 100'-0" and room 20303. The change in location of the doorway does not adversely affect the room's fire protection adequacy evaluation, the ability to provide the necessary ingress and egress from room 20303, the structural design criteria or analyses for the room walls, or any of the fire pump's functions. The change in location of the doorway does not adversely affect the room's fire protection adequacy because the walls that separate these two fire areas continue to provide the same 3-hour fire barrier, which includes the 3-hour fire door that is being relocated. The pump and fire protection system continue to perform their design functions described above, because the change in location of the doorway does not affect any structures, systems, or components (SSCs) contained inside the room, including the fire pump and the Turbine Building Ventilation System (VTS). The VTS continues to provide local heating and ventilation for the room. Ingress and egress to the room is unaffected, because the number of separate clear (unobstructed) doorways for room access is unchanged. The structural design of the room 20303 walls is unchanged by this doorway relocation, because they are being designed to the same codes and standards, both before and after this activity.

The Turbine Building column line changes do not represent a physical design change but are instead being made to clarify the locations of the Turbine Building southeast and southwest walls on plan view figures. Column Line 11.02 is added to more clearly depict that the southwest and southeast walls of the first bay are not collinear, but rather, the southwest wall is located less than 3 feet to the south of the southeast wall. While this departure does not change the actual locations of the walls, as depicted in the UFSAR, it does clarify the relative location of both of these walls in relation to Nuclear Island Reference Column Line 11. The column line change does not affect any SSCs.

These changes do not adversely affect any design function described in the plant-specific DCD. The departure does not involve an adverse change to any method of evaluation for establishing design bases or safety analyses. It does not represent a change to a design feature credited in the ex-vessel severe accident assessment. While the fire protection system provides a nonsafety-related containment spray function for severe accident management, the change in location of the doorway does not adversely affect the room's fire protection adequacy evaluation or any of the fire pump's functions (including ex-vessel severe accident functions). Accordingly, this departure does not represent a change to a design feature credited in the ex-vessel severe accident assessment. Tests, experiments, and procedures described in the licensing basis are unchanged by this activity. The change does not affect the aircraft impact assessment, because the column line change does not

represent a physical design change, and the change to the door location in room 20303 does not affect any key design features credited in the aircraft impact assessment, as described in UFSAR Subsection 19F.4.2.

The activity has no impact on emergency plans or physical security plans. The changes to the column line indicators do not represent physical changes to the plant. The relocation of the door to Room 20303 does not involve a change to perimeter walls or any other aspect of the structures that could impact physical security. Neither Room 20303 itself, nor any door to Room 20303, is considered a variable in any timeline discussed in APP-GW-GLR-066, AP1000 Safeguards Assessment Report (Reference 3). Changes to Room 20303 do not affect responder or adversary timelines.

Main area elevation changes and first bay wall height and thickness changes

The Turbine Building floors at elevations 117'-6", 135'-3", and 161'-0" will be increased in elevation by 3 feet, to 120'-6", 141'-3", and 170'-0", respectively, to provide additional space to facilitate installation of piping, pipe supports, supplemental steel, and other commodities and equipment. The additional height will also provide access space for construction, operation, and maintenance activities.

As a consequence of this change, the height of the first bay walls will be increased from 161'-0" to 169'-0" to allow for installation of blowout panels to compensate for interferences with the current first bay vents as a result of the main area floor elevation change. By raising the height of these walls, the space beneath the south end of the roof can be used for placement of the blowout panels. There will be a 58'-0" wide area between the southwest and southeast first bay walls that would provide approximately 11'-6" of vertical area from the top of the Auxiliary Building parapet (El. 156'-0") to the bottom of the first bay roof once the roof is raised. This would allow for the installation of blowout panels to provide additional venting area that is at least 10 percent greater than the area of the existing vents that would be blocked as a result of the elevation change in the Turbine Building main area. Consequently, this activity will not adversely affect the first bay's ability to relieve pressure in the event of the limiting breaks.

Blowout panels in the south wall of the Turbine Building first bay, as well as panels in the first bay west wall and wall 11.2, activate to relieve pressure in the first bay to mitigate sub-compartment pressurization. The south wall panels are hinged at the bottom and open downward, away from the side of the Turbine Building, without coming into contact with the roof of the Auxiliary Building. Pressure relief pins, designed to yield at the appropriate pressure, normally keep the panel in the closed position. Retaining cables are included in the design to prevent the panel from blowing away or hitting the roof of the Auxiliary Building. The hinge is designed to withstand the panel deployment forces during the sub-compartment pressurization that would be expected during a high energy line break (HELB). The blowout panels are designed to withstand tornado and seismic loading conditions. These design features prevent the south wall blowout panels from becoming a missile following a HELB, tornado, or earthquake.

This first bay wall elevation change further requires increasing the thickness of the first bay walls adjacent to Column Line I.2 and adjacent to Column Line R. Analysis has shown that

increasing the width of these two walls from 2 feet to 3 feet will structurally accommodate the increased height.

Soil-structure interaction analyses were performed to assess the change in the height and thickness of the first bay walls. The analyses were performed using the SASSI 2000 computer code which has been validated for AP1000 calculations. The two-dimensional (2D) analyses were performed using the Vogtle best estimate soil profile and seismic input. Updated building properties were used. The resulting seismic floor response spectra (FRS), soil pressures and basemat stresses for the appropriate nodes and elements of the Turbine Building model were obtained. Figures showing the floor response spectra (FRS) at the three locations of interest and a comparison to the generic AP1000 envelope are provided in Enclosure 5. The results show that the Vogtle FRS are enveloped by the generic AP1000 FRS. As seen from these spectra, there is a slight exceedance in the range of 0.5 Hz and 0.6 Hz, which is consistent with previous results. The calculated maximum soil bearing pressures are enveloped by the generic pressures. Relative displacements at the base and top of the adjacent structures indicate that there is no contact between the structures at the foundation and the superstructure.

This activity will not adversely affect the Turbine Building's seismic interaction. The first bay will continue to maintain a Seismic Category 2 rating.

There is no impact from this change on core damage frequency due to postulated turbine missiles. As stated in Updated Final Safety Analysis Report (UFSAR) Subsection 3.5.1.3, due to the orientation of the turbines and the robust design of the turbine rotors for the AP1000, the potential for unacceptable damage resulting from a turbine missile is less than 10^{-7}; consequently, the potential damage from a high-trajectory missile is not evaluated. This change has no impact on turbine orientation or rotor design, and therefore there is no impact on this probability.

The Turbine Building, including the redesigned first bay wall heights and thicknesses, continues to be designed in accordance with ACI-349 and AISC-N690 for the first bay and ACI-318 and AISC-S335 for the main area, as stated in UFSAR Subsection 3.7.2.8.3. The Turbine Building column line 11.2 wall, which would be increased in height by 8 feet as a result of this change, is identified as a key design feature in the Aircraft Impact Assessment described in UFSAR Subsection 19F.4.2. However, because the number of barriers and the thickness of those barriers, as prescribed by NEI 07-13, Revision 7 (Reference 2) do not change as a result of this departure, there is no impact to the Aircraft Impact Assessment. In addition, because the column line 11.2 wall, which is increased in height by 8 feet, is still designed to the same structural codes and standards, it will continue to perform its Aircraft Impact Assessment design function by protecting the Auxiliary Building from the impact of large commercial aircraft.

This activity does not involve a change to procedures or a method of control and does not change any method of evaluation or use an alternate method of evaluation from those described in the UFSAR which are used in establishing design bases or in the safety analysis. The activity does not involve a test or experiment not described in the plant-specific DCD which exceeds the reference bounds of the design basis. The activity does not adversely impact any design feature credited in the severe accident analysis.

The activity has no impact on emergency plans or physical security plans. There is no change to perimeter walls or other aspects of the structures that could impact physical security. Increasing the floor heights at the three elevations in the Turbine Building has no

impact on security, because response positions (bullet-resistant enclosures) are located above these elevations (196'-0"). Furthermore, increasing the Turbine Building first bay height does not impact the fields of fire or response times discussed in APP-GW-GLR-066 (Reference 3). The increased wall thickness from 2 feet to 3 feet has no impact on the security strategy.

Summary

The proposed changes would revise the VEGP Units 3 and 4 COLs in regard to the AP1000 structures and layout by: (1) changing the door location on the motor-driven fire pump room in the Turbine Building main area, (2) clarifying the column line designations for the southwest and southeast walls of the Turbine Building first bay, (3) raising the floor to ceiling heights at three different elevations in the Turbine Building main area, and (4) increasing elevations and wall thickness in certain walls of the Turbine Building first bay.

These changes do not adversely affect any design function. The departure does not involve an adverse change to any method of evaluation for establishing design bases or safety analyses. It does not represent a change to a design feature credited in the ex-vessel severe accident assessment. Tests, experiments, and procedures described in the licensing basis are unchanged by this activity.

4. Regulatory Evaluation

4.1 Significant Hazards Consideration

The proposed changes would revise the Combined Licenses (COLs) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 in regard to the AP1000 Turbine Building configuration by: (1) changing the door location on the motor-driven fire pump room in the Turbine Building main area, (2) clarifying the column line designations for the southwest and southeast walls of the Turbine Building first bay, (3) raising the floor to ceiling heights at three different elevations in the Turbine Building main area, and (4) increasing elevations and wall thickness in certain walls of the Turbine Building first bay. This activity affects plant-specific Design Control Document (DCD) Tier 2 text, tables, and figures involving a departure from plant-specific DCD Tier 1 information. The Tier 1 departure also involves a proposed amendment to corresponding information in Appendix C of the VEGP Units 3 and 4 COLs.

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

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

Response: No

The proposed changes to the Turbine Building configuration do not alter the assumed initiators to any analyzed event. These changes do not affect the operation of any systems or equipment inside or outside the Turbine Building that could initiate an analyzed accident. The changes to the Turbine Building door location, column line designations, and floor elevations do not have an adverse impact on the ability of the Turbine Building structure to perform its

design function to protect the systems, equipment, and components within this building, because design of this structure, including the redesigned first bay wall heights and thicknesses, will continue to be in accordance with the same codes and standards as stated in the VEGP Units 3 and 4 Updated Final Safety Analysis Report (UFSAR). The Turbine Building first bay continues to maintain its seismic Category II rating. Based on the above, the probability of an accident previously evaluated will not be increased by these proposed changes.

The proposed Turbine Building configuration changes will not affect radiological dose consequence analysis. No accident source term parameter or fission product barrier is impacted by these changes. Structures, systems, and components (SSCs) required for mitigation of analyzed accidents are not affected by these changes, and the function of the Turbine Building to provide weather protection for SSCs inside the building is not adversely affected by these changes. Mitigation of a high energy line break (HELB) in the Turbine Building first bay is not adversely affected by this change, because additional vent area will be added to the south wall of the first bay above the Auxiliary Building roof. This additional vent area will exceed the vent area that is blocked by the change to the Turbine Building main area elevations. Consequently, this activity will not increase the consequences of any analyzed accident, including the main steam line limiting break.

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

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

Response: No

The proposed Turbine Building configuration changes to the location of a door leading to the motor-driven fire pump room, column line designations, floor elevations in the Main Area, and wall heights and thicknesses in the first bay do not change the design function of the Turbine Building or any of the systems or equipment in the Turbine Building or in any other Nuclear Island structures. These proposed changes do not adversely affect any system design functions or methods of operation. These changes do not introduce any new equipment or components or change the operation of any existing systems or equipment in a manner that would result in a new failure mode, malfunction, or sequence of events that could affect safety-related or nonsafety-related equipment. This activity will not create a new sequence of events that would result in significant fuel cladding failures.

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

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

Response: No

The margin of safety for the design of the Turbine Building, including the seismic Category II Turbine Building first bay, is determined by the use of the current codes and standards and adherence to the assumptions used in the analyses of this structure and the events associated with this structure. The relocated door to the motor-driven fire pump room will continue to meet the current 3-hour fire rating requirements. The revised column line designations do not represent a physical plant modification, and have no adverse impact on plant construction or operation. The design of the Turbine Building, including the increased elevations in the main area and the increased height and thickness of the redesigned first bay walls, will continue to be in accordance with the same codes and standards as stated in the UFSAR. The increased elevation of the first bay roof to allow the installation of blow-out panels will provide additional gross vent area for the first bay, which more than compensates for the current vent area that will be blocked by the change in the Turbine Building main area elevations. Consequently, this activity will not adversely affect the first bay's ability to relieve pressure in the event of the limiting main steam line break, and consequently this activity will not reduce the current margin of safety associated with this event to the design pressure limits for Wall 11 of the Nuclear Island and the walls of the first bay. The first bay will continue to maintain a seismic Category II rating. Adhering to the same codes and standards for the Turbine Building structural design and maintaining a seismic Category II rating for the Turbine Building first bay preserves the current structural safety margins.

Therefore, the proposed change 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.

4.2 Applicable Regulatory Requirements/Criteria

10 CFR 52, Appendix D, Section VIII.B.5.a requires that an applicant or licensee who references this appendix may 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 TS, or requires a license amendment under paragraphs B.5.b or B.5.c of this section. When evaluating the proposed departure, an applicant or licensee shall consider all matters described in the plant-specific DCD. This license amendment request departs from Tier 2, Figures 1.2-23, 1.2-24, 1.2-25, 1.2-26, 1.2-27, 1.2-28, 1.2-29, 1.2-30, 9A-2 (Sheets 1, 2, 3, 4, and 5), 12.3-1

(Sheets 15 and 16), 12.3-2 (Sheet 15), 12.3-3 (Sheets 15 and 16), Tier 2 Tables 3.2-2 and 9A-3, and Tier 2 Sections 3.7.2, 9.4.9 and 9A.3. These Tier 2 changes involve changes to Tier 1 Section 3.3, Table 3.3-1 and Figure 3.3-11B, and thus, require NRC approval. In evaluating this departure concerning changes to the Turbine Building configuration in the main area and the first bay, the impact on the design descriptions in the UFSAR (including the plant-specific DCD) as well as on the previous NRC evaluations of the standard AP1000 design in the NUREG-1793, "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," (FSER) have been considered as described below.

The Turbine Building is classified as non-seismic, except for the first bay which is classified as seismic Category II. It is designed to seismic Category I structure tornado loading. It is further designed in accordance with ACI-349 (first bay) and ACI-318 (main area) for concrete structures and with AISC-N690 (first bay) and AISC-S335 (main area) for steel structures. None of these design requirements is impacted by these changes. The Turbine Building evaluations provided in FSER subsections 3.4.1.2 (internal flooding), 3.7.2.8.3 (interaction of seismic Category II and non-seismic structures with seismic Category I structures) and 3.8.5.1 (related to the gap between the foundations for the Turbine Building and the Nuclear Island structures) are not impacted as a result of these changes.

Relative to internal flooding, the NRC evaluation in the FSER subsection 3.4.1.2 approved the AP1000 Turbine Building design based on identification of a limiting break in the circulating water piping. Flow from this break flows from the building to the yard through a relief panel in the Turbine Building west wall. Component cooling and service water system components are all located above the calculated maximum flood level and are therefore expected to be functional. This departure does not affect any of the flood analysis or any of the design features credited in that analysis, such as the relief panel in the Turbine Building west wall. The conclusions in FSER subsection 3.4.1.2 remain valid.

Relative to the seismic interaction evaluation in FSER subsection 3.7.2.8.3 and the gap between the Turbine Building and Nuclear Island foundations, approval of the Turbine Building design is based on adequate separation between the Turbine Building and Nuclear Island and the seismic design criteria applied to the Turbine Building. This departure changes neither of those items, and therefore the conclusions in FSER subsection 3.7.2.8.3 remain valid. Because the Turbine Building is a non-seismic structure containing no safety-related components, there are no other requirements that apply.

4.3 Precedent

No precedent is identified.

4.4 Conclusions

Based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public. The above evaluations demonstrate that the requested changes can be accommodated without an increase in the probability or consequences of an accident previously evaluated, without creating the possibility of a new or different kind of accident from any accident previously evaluated, and without a significant reduction in a margin of safety. Having arrived at negative declarations with regard to the criteria of 10 CFR 50.92, this assessment determines that the requested change does not involve a Significant Hazards Consideration.

5. Environmental Consideration

SNC requests an amendment to the Combined License (COL) Nos. NPF-91 and NPF-92, for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively, to allow departure from various elements in Tier 2 of the plant-specific DCD, which also involve departures from Tier 1 of the plant-specific DCD; thereby necessitating an amendment to the corresponding elements in Appendix C of the COLs. The plant-specific Tier 2 elements for which a departure is requested include Turbine Building configuration changes that involve relocation of a doorway into the motor-driven fire pump room of the Turbine Building, clarification of column line designations for the Turbine Building southeast and southwest walls on the Turbine Building plan view, changes to the floor to ceiling height at three different elevations in the Turbine Building main area, and changes to the Turbine Building first bay wall heights and thicknesses. The proposed departure from plant-specific DCD Tier 2 material involves corresponding departures from plant-specific Tier 1 material related to the Turbine Building configuration. The plant-specific Tier 1 departure changes information related to Turbine Building configuration that supports existing Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC).

SNC has determined that the proposed departure would require an amendment from the VEGP Units 3 and 4 COLs; however, a review of the anticipated construction and operational effects of the proposed amendment has determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), in that:

(i) There is no significant hazards consideration.

As documented in Section 4.1, Significant Hazards Consideration, of this license amendment request, an evaluation was completed to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment." The Significant Hazards Consideration determined that (1) the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated; and (3) the proposed amendment does not involve a significant reduction in a margin of safety. Therefore, it

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

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

The proposed amendment changes aspects of the Turbine Building configuration related to the building height, certain wall thicknesses, a door location, and column line designations. Because these structural parameters are unrelated to the release of plant effluents, these specific changes do not impact any aspects of plant construction or operation that would introduce any changes 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, these changes do not diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation. Therefore, it is concluded that the proposed amendment does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

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

The proposed amendment changes aspects of the Turbine Building configuration related to the building height, certain wall thicknesses, a door location, and column line designations. Because the proposed amendment does not introduce any new radiological sources or adversely affect any structural parameters that are intended to reduce radiation exposure to personnel in the Turbine Building from any outside sources, these specific changes have no effect on individual or cumulative occupational radiation exposure during plant operation. Therefore, it is concluded that the proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

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

6. References

1.) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 Updated Final Safety Analysis Report (UFSAR), Revision 1, June 2012.

2.) NEI 07-13, Revision 7, "Methodology for Performing Aircraft Impact Assessments for New Plant Designs", April 2011.

3.) APP-GW-GLR-066, Revision 1, "AP1000 Safeguards Assessment," March 2009.

Southern Nuclear Operating Company

ND-12-1486

Enclosure 2

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Exemption Request
Regarding Changes to the Structures and Layout of the Turbine Building

Southern Nuclear Operating Company (SNC) requests an exemption from elements of the AP1000 certified (Tier 1) design information to allow changes to the Turbine Building structures and layout, as supported by corresponding changes to the following non-system based design descriptions and Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) figures and tables:

- Table 3.3-1, Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building
- Figure 3.3-11B, Turbine Building General Arrangement Plan at Elevation 100'-0"

This request for exemption provides the technical and regulatory basis to demonstrate that 10 CFR 52.63, §52.7, and §50.12 requirements are met.

SNC requests staff approval of the requested exemption by [**_DATE_**] to support [**_Provide basis for requested approval date_**] Delayed approval of this exemption would result in a delay of this construction activity and subsequent dependent construction activities.

1.0 Purpose

SNC 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 wall heights and concrete wall thicknesses, column line designations, and the location of an interior door between fire areas in the Turbine 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
    - Add a new column line 11.02 to indicate the centerline of the first bay southwest wall. The existing column line 11.05 is used to indicate the centerline of the first bay southeast wall.
    - Increase the concrete thickness of Turbine Building "Wall adjacent to Column Line I.2" and "Wall adjacent to Column Line R" from 2 feet to 3 feet.
    - Increase the maximum elevation of the top of the first bay walls from 161'-0" to 169'-0".

- Figure 3.3-11B, Turbine Building General Arrangement Plan at Elevation 100'-0"
    - Add a new column line 11.02 to indicate the centerline of the first bay southwest wall. The existing column line 11.05 is used to indicate the centerline of the first bay southeast wall.
    - Relocate the doorway in the southeast corner of the room 20303 from the south wall to the east wall.

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

SNC 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. During the detailed design finalization of the Turbine Building, departures from plant-specific DCD Tier 2 information were determined necessary to finalize the layout of space envelopes, orientations, locations and/or piping runs that comprise this structure or the systems within this structure. This activity requests exemption from the generic DCD Tier 1 table and figure that are involved with the plant-specific DCD Tier 2 departures, and which support the associated COL Appendix C ITAAC.

Turbine Building Layout Changes

An intermediate column currently located at the intersection of column lines P.2 and 19.1 on Elevation (El.) 141'-3" of the Turbine Building interferes with the layout and maintenance space of Switchgear Room #2 (room 20501). To resolve this interference, the column is relocated to column lines P.1 and 19.1. This change requires the doorway in the southeast corner of the Motor-Driven Fire Pump Room (room 20303) at El. 100'-0" to be relocated from the south wall to the east wall to clear the revised footprint of the intermediate column. This departure requires an exemption from AP1000 DCD Tier 1 Figure 3.3-11B, to depict the revised door location.

Additionally, column lines 11.05 and 11.1, as currently depicted in the AP1000 DCD figures, do not clearly reflect the dimensions of the first bay south walls. The southeast wall (between column lines I.1 and K.4) and the southwest wall (between column lines Q and R) are not collinear, so they need to be assigned different column line designations to clearly indicate their relative locations. Unless the walls are identified with different column line designations, it will not be possible to accurately dimension the centerline of both the southwest and southeast walls in the Turbine Building. Therefore, a new column line 11.02 is added to indicate the centerline of the first bay southwest wall. The existing column line 11.05 is used to indicate the centerline of the first bay southeast wall. This activity clarifies the column designation of the first bay southeast and southwest walls only, and does not make any physical design changes or modify any structures, systems, or components (SSCs). This departure requires an exemption from AP1000 DCD Tier 1 Table 3.3-1 and Figure 3.3-11B to reflect the use of column lines 11.02 and 11.05 for indicating the centerlines of the first bay southwest and southeast walls, respectively.

First Bay Wall Height and Thickness Changes

Floor-to-ceiling heights in the main area of the Turbine Building at the current elevations 117'-6", 135'-3", and 161'-0", are being increased by 3 feet to provide additional space to facilitate installation of piping, pipe supports, supplemental steel, and other commodities and equipment. The additional space will also provide access space for construction, operation, and maintenance activities.

First bay floor elevations do not change with the Turbine Building main area floors due to access constraints with the Annex and Auxiliary Buildings. Therefore, due to the Turbine Building elevation changes, a mismatch will result between the Turbine Building floors and the first bay floors. The floor elevation mismatch limits the steam vent space area in wall 11.2 due to interferences created with the existing vents as a result of the elevation change in the Turbine Building main area. Therefore, in order to provide adequate gross vent area, the first bay roof is raised to 169'-0" and blowout panels are located beneath the south end of the roof, and to maintain seismic Category II structural capability in the first bay, the thickness of the first bay east wall (adjacent to Column Line I.2) and west wall (adjacent to Column Line R) is increased from 2 feet to 3 feet. This departure requires an exemption from AP1000 DCD Tier 1 Table 3.3-1 to reflect the revised first bay wall height and to identify the revised concrete wall thickness for the first bay east and west walls.

As discussed, 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 Figure 3.3-11B and Table 3.3-1.

3.0 Technical Justification of Acceptability

An exemption is requested to depart from AP1000 generic DCD Tier 1 material in regard to the AP1000 Turbine Building configuration by: (1) Relocating the doorway in the southeast corner of the Motor-Driven Fire Pump Room (room 20303 on El. 100'-0") from the south wall to the east wall; (2) Adding a new column line 11.02 to designate the first bay southwest wall and clarifying existing column line designation 11.05 to apply to the first bay southeast walls; (3) increasing the maximum elevation of the top of the first bay walls from 161'-0" to 169'-0"; and (4) increasing the concrete thickness of the first bay wall adjacent to column line I.2 and the first bay wall adjacent to column line R from 2 feet to 3 feet. The proposed exemption would allow a change to a plant-specific Tier 1 Figure 3.3-11B and Table 3.3-1. The proposed changes to the design information presented in plant-specific Tier 1 Table 3.3-1 and Figure 3.3-11B are at a level of detail that is consistent with the information currently provided therein.

The AP1000 turbine building houses the main turbine, generator, and associated fluid and electrical systems. The design function of the Turbine Building is to provide weather protection for the laydown and maintenance of major turbine/generator components. No safety-related equipment is located in the turbine building. The design function of the doors between the room 20303 and Turbine Building El. 100'-0" is to provide part of the 3-hour fire barrier between these two fire areas. The Turbine Building, shown in UFSAR Figures 1.2-23 and 1.2-30, consists of two sections, the main area, which houses the turbine, and the first bay. The first bay is immediately adjacent to the auxiliary building, and consists of reinforced concrete walls and steel framing with reinforced concrete and steel grated floors.

The Tier 1 design changes proposed by this exemption request have been reviewed and it was determined that they would neither adversely impact the ability to meet the design functions of the Turbine Building or any structures or components therein, nor involve a significant decrease in the level of safety provided by the structure. The review also confirmed that this activity does not adversely affect the Turbine Building's seismic interaction with the Nuclear Island (NI) structures. The first bay continues to maintain a seismic Category II rating. The proposed changes to information in plant-specific DCD Tier 1 Table 3.3-1 and Figure 3.3-11B continue to provide the detail necessary to implement the corresponding ITAAC.

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

4.0 Justification of Exemption

10 CFR 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. Since SNC has identified changes to the Tier 1 information related to the Turbine Building layout and structures as a result of design finalization activities, an exemption to the certified design information in Tier 1 is needed.

10 CFR 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 design of the Turbine Building layout and structures 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 Tier 1 DCD 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 ITAAC in Tier 1 of the plant-specific DCD will continue to serve its required purpose.

The changes to increase the Turbine Building first bay roof height and wall thicknesses, relocate a door to the Motor-Driven Fire Pump room and clarify column line designations affect the Turbine Building structure only, and do not add, delete, or modify systems or equipment as described in Tier 1 of the AP1000 DCD. These Turbine Building changes will not impact the ability of the Turbine Building to perform its design function of providing weather protection for the laydown and maintenance of major turbine/ generator components. Because the Turbine Building changes will not adversely affect the operation of any plant equipment or systems, these changes do not present an undue risk from existing equipment or systems. These changes do not add any new equipment or system interfaces to the current plant design. The Turbine Building structures and layout 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 that 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 significant fuel cladding failures. Accordingly, these changes do not present an undue risk from any new 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 Turbine Building layout and structures as presented in a non-system based design description and ITAAC figure and table in the plant-specific Tier 1 DCD, 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 does not alter or impede 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 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 "[a]pplication 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.

The proposed change to increase the Turbine Building first bay height supports a design change that will facilitate plant construction and future safe plant operation and maintenance by increasing the height of three Turbine Building main area floor elevations, while maintaining the ability to safely vent steam from the MSIV compartment following a postulated main steam line break. The associated change to increase the thickness of the first bay east and west walls supports this change by maintaining the ability to protect the adjacent Nuclear Island Auxiliary Building from the rest of the Turbine Building during a seismic event. Similarly, the proposed change to relocate the door to the Motor-Driven Fire Pump room supports a change to relocate an intermediate column on another plant elevation, thereby facilitating plant layout and future maintenance in the vicinity of that column. The relocated doorway and the adjoining wall will continue to meet their design function by providing a 3-hour fire barrier between the adjacent fire zones that are separated by these structural elements. The proposed change to designate a new column line for the first bay southwest wall and re-designate the southeast wall with the current column line number will facilitate plant layout and construction by improving the accuracy of the plant layout figures, with no impact on the ability of these structures to perform as designed.

Based on the above, each of the requested changes will facilitate plant construction and maintain or enhance future safe plant operation and maintenance, while supporting the ability of the Turbine Building structure to perform its design functions. 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 would not serve the underlying purpose of the rule or 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 Tier 1 DCD by departing from standard AP1000 certified (Tier 1) design information. This exemption would allow a change to a non-system based design description and 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, a review of the reduction in standardization resulting the departure from the standard DCD determined that 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 Turbine 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 marked-up table and figure demonstrate that there is a minimal 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 Turbine Building structure and layout as presented in a non-system based design description and 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.

The relocated door to the Motor-Driven Fire Pump room will not affect the operation of the fire pumps in this room, or the system's conformance with the National Fire Protection Association (NFPA) Code, NFPA-20. The design of the Turbine Building, including the increased height and thickness of the redesigned first bay walls, will continue to be in accordance with the same codes and standards (ACI-349 and AISC N690 for the first bay and ACI-318 and AISC-S335 for the main area), as stated in the Vogtle UFSAR. The increased elevation of the first bay roof to allow installation of blow-out panels will provide sufficient gross vent area for the first bay following a postulated main steam line double-ended break, and the increased thickness of the walls will structurally accommodate the increased height of the first bay roof, such that the Turbine Building first bay seismic Category II capabilities will be maintained. Because the proposed changes associated with this exemption request will not modify the design or operation of any systems or equipment, there are no new failure modes introduced by these changes and the level of safety provided by the current Turbine Building and the systems and equipment contained therein will be unchanged.

Because the proposed changes to the Turbine Building structure and layout will not adversely affect the ability of the Turbine Building to perform its design functions and the level of safety provided by the current Turbine Building and the systems and equipment contained therein is unchanged, it is concluded that the design change associated with 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.

7.0 Conclusion

SNC 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 Tier 1 DCD to reflect proposed plant-specific design. The proposed exemption would allow departure from AP1000 generic Tier 1 DCD information by changing the door location on the Motor-Driven Fire Pump Room, clarifying the column line designations for the southwest and southeast walls of the Turbine Building, and increasing elevations and wall thickness in certain walls of the Turbine Building first bay. 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.

8.0 Environmental Consideration

SNC requests a departure from elements of the certified information in Tier 1 of the generic AP1000 DCD. The Tier 1 elements for which a departure is requested include ITAAC and the supporting information specified in a table and figure referenced in a non-system based design description and ITAAC. The Tier 1 departure includes changes and clarifications to detailed information that supports existing ITAAC, such as changes to floor elevations and concrete wall thicknesses, column line designations, and similar supporting information. The proposed departure from AP1000 generic DCD Tier 1 material reflects corresponding departures from Tier 2 material that will change the door location on the Motor-Driven Fire Pump Room, clarify column line designations for the southwest and southeast walls of the Turbine Building, and increase elevations and wall thickness in certain walls of the Turbine Building first bay.

SNC 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, SNC 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, SNC 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.

9.0 References

1.) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 Updated Final Safety Analysis Report (UFSAR), Revision 1, June 2012.

2.) NUREG-0800, U. S. Nuclear Regulatory Commission Standard Review Plan, Section 9.5.1, “Fire Protection Program,” Revision 3, July 1981, including Branch Technical Position (BTP) CMEB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants," Revision 2, July 1981.

Southern Nuclear Operating Company

ND-12-1486

Enclosure 3

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Licensing Basis Documents - Proposed Changes
(Publicly Available Information)
(LAR-12-006)

Tier 1, Table 3.3-1

"Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building"

(This change is also incorporated into VEGP Unit 3 and Unit 4 COLs, Appendix C)

[DCD Tier 1, pg. 3.3-12]

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable Radiation Shielding Wall (Yes/No)
Wall adjacent to Column Line I.2	From Col. Line 11.05 to 11.2	From 100'-0" to 169~~1~~'-0"	3~~2~~'-0"	No
Wall along Column Line 11.2	From near I.2 to near Col. Line R	From 100'-0" to 169~~1~~'-0"	2'-0"	No
Wall adjacent to Column Line R	From Col. Line 11.2 to Col. Line 11.02 ~~11.05~~	From 100'-0" to 169~~1~~'-0"	3~~2~~'-0"	No
Wall along Column Line 11.02~~11.05~~	From near Col. Line R to Col. Line Q	From 100'-0" to 169~~1~~'-0"	2'-0"	No
Wall along Column Line 11.05	From Col. Line K.4 to near Col. Line I.2	From 100'-0" to 169~~1~~'-0"	2'-0"	No

[VEGP Unit 3 COL, Appendix C, pg. C-419]

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable Radiation Shielding Wall (Yes/No)
Wall adjacent to Column Line I.2	From Col. Line 11.05 to 11.2	From 100'-0" to 169~~1~~'-0"	3~~2~~'-0"	No
Wall along Column Line 11.2	From near I.2 to near Col. Line R	From 100'-0" to 169~~1~~'-0"	2'-0"	No
Wall adjacent to Column Line R	From Col. Line 11.2 to Col. Line 11.02	From 100'-0" to 169~~1~~'-0"	3~~2~~'-0"	No
Wall along Column Line 11.02~~11.05~~	From near Col. Line R to Col. Line Q	From 100'-0" to 169~~1~~'-0"	2'-0"	No
Wall along Column Line 11.05	From Col. Line K.4 to near Col. Line I.2	From 100'-0" to 169~~1~~'-0"	2'-0"	No

[VEGP Unit 4 COL, Appendix C, pg. C-419]

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable Radiation Shielding Wall (Yes/No)
Wall adjacent to Column Line I.2	From Col. Line 11.05 to 11.2	From 100'-0" to 169~~1~~'-0"	3~~2~~'-0"	No
Wall along Column Line 11.2	From near I.2 to near Col. Line R	From 100'-0" to 169~~1~~'-0"	2'-0"	No
Wall adjacent to Column Line R	From Col. Line 11.2 to Col. Line 11.02	From 100'-0" to 169~~1~~'-0"	3~~2~~'-0"	No
Wall along Column Line 11.02~~11.05~~	From near Col. Line R to Col. Line Q	From 100'-0" to 169~~1~~'-0"	2'-0"	No
Wall along Column Line 11.05	From Col. Line K.4 to near Col. Line I.2	From 100'-0" to 169~~1~~'-0"	2'-0"	No

Updated Final Safety Analysis Report (UFSAR) Table 3.2-2

Revise selected table entries, as follows:

Table 3.2-2
Seismic Classification of Building Structures

Structure	Category [(1)]
Turbine Building – First bay adjacent to Nuclear Island outlined by Columns I.1 to R, ~~and~~ 11.05 to 11.2, and 11.02 to 11.2	C-II

UFSAR Section 3.7.2.8.3

"Turbine Building"

Revise the first paragraph, as follows:

The south end of the turbine building is separated from the rest of the turbine building by a 2'-0" thick reinforced concrete wall that provides a robust structure around the first bay. This wall isolates the first bay of the turbine building from the general area of the turbine building and from the adjacent yard area. The main segment of this wall is located on column line 11.2. This wall extends from El.100'-0" basemat to El. 169'-0".~~the El. 161'-0" operating floor.~~ The first bay of the turbine building is classified as seismic Category II. The other bays are classified as non-seismic. The structure configuration is shown in Figure 3.7.2-20.

UFSAR Section 9.4.9.2.1.1

"General Area Heating and Ventilation"

Revise the first paragraph, as follows:

Most of the turbine building is supplied by the general area ventilation and heating subsystem. Air is exhausted from the turbine building to the atmosphere by roof exhaust ventilators. The roof exhaust ventilators pull in outside air through wall louvers located at elevations 100′-0″, 120′-6″, and 141′-3″ ~~117′-6″, and 135′-3″~~. Wall louvers are located at the operating deck to provide additional air during plant outage operations. The general area heating subsystem uses hot water unit heaters to provide local heating throughout the turbine building. During heating operation, the general area ventilation system is not operated.

UFSAR Section 9.4.9.2.1.2

"Electrical Equipment and Personnel Work Area HVAC"

Revise the first and second paragraphs, as follows:

The electrical equipment, south bay equipment, and personnel work area air conditioning subsystem serves electrical equipment areas (switchgear rooms and the electrical equipment room), the south bay equipment (CCS pumps, BDS pumps, and reactor coolant pumps variable frequency drive power converter areas), and personnel work areas (secondary sampling laboratory, office space at elevation 158′-7" and 183′ ~~149′ and 174′~~). This subsystem is subdivided into three independent HVAC systems, one serving the electrical equipment areas, one serving the south bay equipment, and one serving the personnel work areas.

The electrical equipment HVAC system consists of two 50 percent capacity air handling units with a supply fan and a return air fan of about 16,500 scfm each, a ducted supply and return air system, automatic controls, and accessories. The air handling units are located on elevation 158′-7″ ~~149′ 0″~~ of the turbine building. The temperature of the rooms is maintained by thermostats which control the chilled water control valves for cooling and the integral face/bypass dampers for heating. Outside air is mixed with recirculated air to maintain a positive pressure.

UFSAR Section 9A.3.2.1
"Fire Area 2000 AF 01"

Revise selected text, as follows:

9A.3.2.1 Fire Area 2000 AF 01

* * *

Fire Zone	Room No.	
* * *		
• 2040 AF 20400	20400	Elevation 120′-6″ ~~117′-6″~~ general floor area
* * *		
• 2050 AF 20500	20500	Elevation 141′-3″ ~~135′-3″~~ general floor area
* * *		
• 2053 AF 20506	20505	Office area at 158′ - 7″ ~~149′ - 0″~~
* * *		
• 2060 AF 20600	20600	Elevation 170′-0″ ~~161′ -0″~~ general floor area
* * *		
• 2063 AF 20602	20602	Office area/engineering workstation at elevation 183′-1 1/2″ ~~175′-1 1/2"~~ * * *

Fire Detection and Suppression Features

* * *

Automatic suppression for the following equipment: the service water pumps, the start-up feedwater pumps and MCCs and control equipment at elevation 141′-3″ ~~135′-3″~~ (in the area defined by column 13.1 to 14 and P.1 to O).

UFSAR Section 9A.3.2.4

"Fire Area 2009 AF 02"

Revise the first paragraph, as follows:

This elevator serving the turbine building from elevation 100′-0″ to elevation 170′-0″ ~~161′-0″~~ and its machine room are enclosed by fire barrier walls having a minimum rating of 2 hours. These nonstructural walls are metal lined gypsum board. The elevator machine room is above the elevator tower at elevation 196′-3″ ~~171′-0″~~. There are no radioactive systems in this fire area.

UFSAR Section 9A.3.2.7

"Fire Area 2009 AF 03"

Revise the first paragraph, as follows:

This stairwell serves the northwest portion of the turbine building from 158′-7″ ~~149′-0″~~ to 196′-3″ ~~187′-3″~~. The walls of this enclosure that are exposed to the turbine building interior are constructed with a concrete/steel composite material having a minimum fire rating of 2 hours. The walls of the enclosures that face the yard area would not be exposed to the turbine building interior; therefore, these outside walls are constructed with an exterior siding common to the overall siding used for the turbine building. There are no safety-related components or systems in this fire area that contain radioactive material. There are no systems in this fire area that contain radioactive material. The quantity of combustible materials in the stairwell is negligible, and no fire is postulated in this fire area. A fire protection hose riser is located in the stairwell with NFPA Class I hose connections at intermediate stair landings.

UFSAR Table 9A-3

Revise selected table entries, as follows:

Table 9A-3 (Sheet 12 of 24)
Fire Protection Summary

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]
2000 AF 01	NO										
2040 AF 20400			CABLE INS	C	87,800	9.0E+08				HEAT	WET PIPE
ELEVATION 120'-6" ~~117'-6"~~			LUBE OIL	E	1450	2.2E+08					SPRINKLERS
GENERAL FLOOR AREA			PLASTIC	D	6500	8.6E+07					HOSE STATION
			VOLATILES	E	180	2.4E+07					
			TRASH	B	1500	1.2E+07					
		42,606	NET CAT.	E	TOTAL	1.2E+09	28,170	21			
* * *											
2050 AF 20500			CABLE INS	C	87000	8.9E+08				HEAT	WET PIPE
ELEVATION 141'-3" ~~135'-3"~~			LUBE OIL	E	5400	8.2E+08					SPRINKLERS
GENERAL FLOOR AREA			PLASTIC	D	6000	7.9E+07					HOSE STATION
			VOLATILES	E	100	1.4E+07					
			HYDROGEN	E	50	7.6E+06					
			TRASH	B	50	3.9E+06					
		378900	NET CAT.	E	TOTAL	1.8E+09	47510	36			

UFSAR Table 9A-3

Revise selected table entries, as follows:

Table 9A-3 (Sheet 13 of 24)
Fire Protection Summary

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]
2053 AF 20506			CABLE INS	C	720	7.2E+06				SMOKE	HOSE STATION
OFFICES AT 158'-7" ~~149'-0"~~			PLASTIC	D	900	1.2E+07					
			TRASH	B	50	4.0E+05					
			CLOTH	B	720	5.7E+06					
			PAPER	C	14000	1.1E+08					
			WOOD	C	1800	1.5E+07					
		3634	NET CAT.	D	TOTAL	1.5E+08	41400	39			
* * *											
2060 AF 20600			CABLE INS	C	1000	1.0E+07				HEAT	WET PIPE[7]
ELEVATION 170'-0" ~~161'-0"~~			LUBE OIL	E	250	3.8E+07					SPRINKLERS
GENERAL FLOOR AREA			PLASTIC	D	2500	3.3E+07					HOSE STATION
			VOLATILES	E	55	7.5E+06					
			TRASH	B	1000	7.7E+06					
		44042	NET CAT.	E	TOTAL	9.6E+07	2200	2			
* * *											

Southern Nuclear Operating Company

ND-12-1486

Enclosure 4

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Licensing Basis Documents - Proposed Changes
(Withheld Information)
(LAR-12-006)