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U.S. Nuclear Regulatory Commission  
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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Units 3 and 4  
Request for License Amendment and Exemption:  
Tier 1 Definition of Wall Thicknesses (LAR-12-008)

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 Numbers NPF-91 and NPF-92, respectively). This amendment request proposes to depart from certified AP1000 Design Control Document (DCD) Tier 1 material, and to revise the associated material that has been included in Appendix C of each of the VEGP Units 3 and 4 COLs. 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 these plant-specific DCD Tier 1 material departures.

The proposed departures consist of changes to Tier 1 Table 3.3-1, Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building. The requested departures are necessary for consistent definition of wall, roof and floor thickness between Tier 1 and the remainder of the Updated Final Safety Analysis Report (UFSAR), which includes the plant-specific DCD Tier 2 information. Enclosure 1 provides the description, technical evaluation, and regulatory evaluation (including the Significant Hazards Consideration determination) for the proposed changes. Enclosure 2 provides the background and supporting basis for the requested exemption. Enclosure 3 provides markups depicting the requested changes to the Unit 3 and 4 COL Appendix C Table 3.3-1 and the plant-specific DCD Tier 1 Table 3.3-1. This letter contains no regulatory commitments.

SNC is also submitting a Preliminary Amendment Request (PAR) which requests a "no objections" finding by the NRC Staff prior to January 3, 2013, to allow construction to proceed consistent with these requested revisions. Following that finding on the PAR, this license amendment is requested to be issued within six months of the date of this letter to support activities necessary for completion of the Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) associated with Table 3.3-1.

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SNC expects to implement the proposed amendment (through incorporation into the licensing basis documents, e.g., the plant-specific DCD and COL Appendix C) within 30 days of approval of the requested changes.

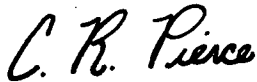
In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this LAR by transmitting a copy of this letter and enclosures to the designated State Official.

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/ERG/kms

Sworn to and subscribed before me this 21<sup>st</sup> day of September, 2012

Notary Public: Kristin Marie Seibert

My commission expires: August 16, 2016

- Enclosures:
1. Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Request for License Amendment Regarding Tier 1 Definition of Wall Thicknesses (LAR-12-008)
  2. Vogtle Electric Generating Plant (VEGP) Units 3 and 4 –Exemption Request Regarding Tier 1 Definition of Wall Thicknesses
  3. Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Proposed Changes to Licensing Basis Documents (LAR-12-008)

cc: Southern Nuclear Operating Company/ Georgia Power Company

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Mr. J. A. Miller, Executive VP, Nuclear Development  
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Mr. M. D. Rauckhorst, VP, Vogtle 3 & 4 Construction (w/o enclosures)  
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Mr. J. R. Johnson, VP, Operational Readiness, Vogtle 3 & 4 (w/o enclosures)  
Mr. T. E. Tynan, Site VP, Vogtle 1 & 2  
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Mr. P. A. Russ, Director, AP1000 Global Licensing  
Mr. R. A. DeLong, Director of U.S. & International Licensing (acting)  
Mr. S. A. Bradley, Vogtle Project Licensing Manager  
Mr. T. J. Ray, Manager, AP1000 COL Licensing Support

Other

Mr. J. S. Prebula, Project Engineer, Bechtel Power Corporation (w/o enclosures)  
Mr. R. W. Prunty, Licensing Engineer, Bechtel Power Corporation  
Ms. K. K. Patterson, Project Manager, Tetra Tech NUS, Inc.  
Dr. W. R. Jacobs, Jr., Ph.D., Executive Consultant, GDS Associates, Inc.  
Mr. S. Roetger, Internal Consultant Analyst, Georgia Public Service Commission  
Ms. S. W. Kernizan, Director of the Electric Unit, Georgia Public Service Commission  
Mr. K. C. Greene, Partner, Troutman Sanders

**Southern Nuclear Operating Company**

**ND-12-1832**

**Enclosure 1**

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

**Request for License Amendment Regarding  
Tier 1 Definition of Wall Thicknesses**

**(LAR-12-008)**

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

During recent design reviews, SNC has identified inconsistencies between the Tier 1 information providing the "definition of wall thicknesses for nuclear island building, turbine building, and annex building" and the Updated Final Safety Analysis Report (UFSAR), including the plant-specific Design Control Document (DCD) Tier 2, information from which it was derived. The enclosed requested licensing actions that require a regulatory decision will restore the consistency of the information.

SNC is also submitting a Preliminary Amendment Request (PAR) which requests a "no objections" finding by the NRC Staff prior to January 3, 2013, to allow construction to proceed consistent with these requested revisions. Following that finding on the PAR, this license amendment is requested to be issued within six months of the date of this letter to support activities necessary for completion of the Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) associated with Table 3.3-1.

## **1. Summary Description**

The proposed changes would revise the plant-specific DCD Tier 1 information in Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building," to bring the wall, roof and floor thicknesses into consistency with the UFSAR, which includes the plant-specific DCD Tier 2 information. The Tier 1 information departure also involves a proposed amendment to corresponding information presented in Appendix C of the Vogtle Electric Generating Plant (VEGP) Units 3 and 4 combined licenses (COLs).

## **2. Detailed Description**

This license amendment request (LAR-12-008) revises plant-specific DCD Tier 1 (and COL Appendix C) Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building," for consistency, clarity and completeness. The requested changes are to the wall, roof and floor descriptions included in Table 3.3-1. The need for this change was identified during a consistency review of the entire Table 3.3-1, following a determination that some specific Table 3.3-1 entries were inconsistent with their related plant-specific DCD Tier 2 technical information.

The plant-specific DCD Tier 1 information changes do not represent any physical design change, thus, do not affect any safety-related structure, system or component, their function, plant effluent, design analysis, safety analysis, or radiation zone designations. This requested change will not change the as-built configuration of the plant.

Plant-specific DCD Tier 1 (and COL Appendix C) Table 3.3-6, ITAAC 2.a) Acceptance Criterion ii.a) states "A report exists that concludes that the containment internal structures as-built concrete thicknesses conform to the building sections defined in Table 3.3-1." In addition, Table 3.3-6 Criteria 2.a) ii.b through ii.f also refer to Table 3.3-1. Thus, the technical information within Table 3.3-1 will be verified as part of the ITAAC closure process. To support the ITAAC closure process, a Table 3.3-1 consistency review was performed that also identified specific proposed a) wording changes to improve the understandability of

(i.e., clarify) the content, and b) additional line items for completeness. Specific items related to completeness include adding missing information (such as missing "Applicable Radiation Shielding Wall" designations) and re-designation of Column Line I wall descriptions to include the complete wall (particularly where the roof is sloped).

The individual plant-specific DCD Tier 1 Table 3.3-1 proposed departures (and corresponding COL Appendix C, Table 3.3-1 changes) are described below.

Note that each item is provided with a specific designation (in parentheses) for ease of reference to aid any future discussions. In addition, we have categorized each item as a change for consistency, clarification, or completion. The proposed wording changes are identified in red in Enclosure 3.

**Containment Building Internal Structures** section of Table 3.3-1:

- **Shield Wall between Reactor Vessel Cavity and RCDT Room (RV-1).**
  - The Column Lines description of the wall is revised for clarity and consistency. Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheets 1, 8 and 9. The wall thickness is being clarified to be only in the section defined by the inside wall parallel with the Column Line. In addition, the location of the inside face of the wall is designated since the wall transitions at an upper elevation.
- **West Reactor Vessel Cavity Wall (RV-2).**
  - The Column Lines description of the wall is revised for clarity and consistency. Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheet 2. The wall thickness is being clarified to be only in the section defined by the inside wall parallel with the Column Line.
- **North Reactor Vessel Cavity Wall (RV-4).**
  - The Column Lines description of the wall is revised for clarity and consistency. Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheet 2. The wall thickness is clarified to be only in the section defined by the inside wall parallel with the Column Line.
- **East Reactor Vessel Cavity Wall (RV-3).**
  - The Column Lines description of the wall is revised for clarity and consistency. Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheet 2. The wall thickness is being clarified to be only in the section defined by the inside wall parallel with the Column Line.
- **West wall of west steam generator compartment (WSG-2).**
  - The Column Lines description of the wall is revised for clarity. Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 6.
- **West wall of pressurizer compartment (P-2).**
  - The Column Lines description of the wall is revised for clarity. Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 6.

- North wall of pressurizer compartment (P-3).
  - The Column Lines description of the wall is revised for clarity. Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 6
- East wall of pressurizer compartment (P-4).
  - The Column Lines description of the wall is revised for clarity. Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 6.
- East wall of east steam generator compartment (ESG-2).
  - The Column Lines description of the wall is revised for clarity. Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 9.
- North wall of east steam generator compartment (ESG-3).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency. The height information is being updated to be as shown in Tier 2 Figure 3.7.2-12, sheets 6 and 9. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 2, 3, 4 and 5.

**Auxiliary Building Walls/Floors Radiologically Controlled section of Table 3.3-1:**

- Column Line 2 wall – From L-2 to N (CL2-3).
  - The Floor Elevation or Elevation Range description of the wall is revised for consistency. The lower elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheet 2. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 3, 4 and 5.
- Column Line 4 wall – From I to J-1 (CL4-1).
  - The Floor Elevation or Elevation Range description of the wall is revised for consistency. The upper elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 4, 5 and 11. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 1, 2 and 3.
- Column Line 7.1 wall – From I to 8' East of J-1 (CL7-1).
  - The Wall or Section Description of the wall is revised for clarity and consistency. The wall location is being updated in accordance with Tier 2 Figure 3.7.2-12, sheet 1. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
- Column Line 7.2 wall – From I to 5'-6" East of J-1 (CL7-2).
  - The Wall or Section Description of the wall is revised for clarity and consistency. The wall location is being updated in accordance with Tier 2 Figure 3.7.2-12, sheet 1. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
  - The Floor Elevation or Elevation Range description of the wall is revised. Elevation information is being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheet 1. A portion of the line item is split into a new line discussed below. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.



- Wall South of Column Line 7.3 – From I to just east of J – From 82'-6" to 100'-0" (CL7-3).
  - A new line item is added with a slightly revised Column Line description for clarity and consistency.
  - This new line item is being separated by elevation for clarity to show that the wall length is not the same on each elevation as shown in Tier 2 Figure 3.7.2-12, sheets 1 and 2.
  - This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
- Column Line I wall – From 1 to 4 - From 66'-6" to 100'-0" (CLI-1).
  - The Column Lines description of the wall is revised for clarity and consistency.
  - Column lines are being clarified to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2 and 11. Portions of this line item are included in new line items discussed below. (It should be noted that Sheet 11 does not actually show Column Line I but is an appropriate figure to fully represent the wall.)
- Column Line I wall – From 3 to 4 - From 100'-0" to 107'-2" (CLI-2).
  - A new line item is included to clarify the wall thickness in this area for clarity and consistency.
  - The wall thickness is revised to as shown in Tier 2 Figure 3.7.2-12, sheets 3 and 11.
- Column Line I wall – From 4 to 16'-0" south of 5 – From 66'-6" to 107'-2" (CLI-3).
  - A new line item is added to address a portion of a revised item from above for clarity and consistency.
  - This new line item is being added for clarity to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2, 3 and 11.
- Column Line I wall – From 16'-0" south of 5 to 5 – From 66'-6" to 105'-0" (CLI-4).
  - A new line item is added to address a portion of a revised item from above for clarity and consistency.
  - This new line item is being added for clarity to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2 and 11.
- Column Line I wall – From 5 to 7.3 – From 66'-6" to 100'-0" (CLI-5).
  - A new line item is added to address a portion of a revised item from above for clarity and consistency.
  - This new line item is being added for clarity to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2, 9 and 11.
- Column Line I wall – From 1 to 3 – From 100'-0" to roof (CLI-6).
  - A new line item is added to address a portion of a deleted item discussed below for clarity and consistency and to include a missing portion of the wall related to the sloped roof.
  - This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 11.

- Column Line I wall – From 3 to 4 – From 107'-2" to roof (CLI-7).  
- A new line item is added to address a portion of a deleted item discussed below for clarity and consistency and to include a missing portion of the wall related to the sloped roof.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 11.
- Column Line I wall – From 4 to 16'-0" south of 5 – From 107'-2" to roof (CLI-8).  
- A new line item is added to address a portion of a deleted item discussed below for clarity and consistency and to include a missing portion of the wall related to the sloped roof.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 11.
- Column Line I wall – From 16'-0" south of 5 to 5 – From 105'-0" to roof (CLI-9).  
- A new line item is added to address a portion of a deleted item discussed below for clarity and consistency and to include a missing portion of the wall related to the sloped roof.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 11.
- Column Line I wall – From 1 to 4 – From 100'-0" to 180'-0".  
- This previous line item is removed for clarity and consistency and to include a missing portion of the wall related to the sloped roof.  
This line item is being removed because its location and information are addressed by the Column Line I wall items included above (CLI-2, CLI-6 and CLI-7).
- Column Line I wall – From 4 to 5 – From 100'-0" to 160'-6".  
- This previous line item is removed for clarity and consistency and to include a missing portion of the wall related to the sloped roof.  
This line item is being removed because its location and information are addressed by the Column Line I wall items included above (CLI-3, CLI-4, CLI-8 and CLI-9).
- Column Line N wall – From 1 to 12'-9" north of 1 – From 100'-0" to 125'-0" (CLN-2).  
- The Applicable Radiation Shield Wall description is revised for consistency.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I." This wall is shown on Figure 3.7.2-12, sheets 3 and 10.

- Column Line N wall – From 1 to 12'-9" north of 1 – From 125'-0" to 135'-3" (CLN-3).
  - The Floor Elevation or Elevation Range description of the wall is revised for consistency.  
The upper elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 4 and 10.
  - The Applicable Radiation Shield Wall description is revised for consistency.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I."
- Column Line N wall – From 12'-9" north of 1 to 2 – From 100'-0" to 118'-2½" (CLN-4).
  - The Applicable Radiation Shield Wall description is revised for consistency.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I." This wall is shown on Figure 3.7.2-12, sheet 3.
- Column Line N wall – From 12'-9" north of 1 to 2 – From 118'-2½" to 135'-3" (CLN-5).
  - The Applicable Radiation Shield Wall description is revised for consistency.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I." This wall is shown on Figure 3.7.2-12, sheet 4.
- Column Line N wall – From 1 to 2 – From 118'-2 1/2" to 135'-3".
  - This previous line item is removed for clarity and consistency.  
This line item is being removed because its location and information are addressed by the other line items included in the table above (CLN-2, CLN-3 and CLN-5).
- Column Line N wall – From 2 to 4 – From 66'-6" to 98'-1" (CLN-6).
  - The Column Lines description of the wall is revised for consistency.  
Column lines are being clarified to denote that the wall does not extend to column line 4, but to the shield building as shown in Tier 2 Figure 3.7.2-12, sheets 1 and 2.
  - The Concrete Thickness dimension is revised for clarity and consistency.  
The wall thickness is updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 1, 2 and 10.
- Column Line N wall – From 2 to 4 – From 98'-1" to 135'-3" (CLN-7).
  - The Column Lines description of the wall is revised for clarity and consistency.  
Column lines are being clarified to denote that the wall does not extend to column line 4, but to the shield building as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
- Column Line N wall – From 1 to 4 – From 135'-3" to 180'-0" (CLN-8).
  - The Column Lines description of the wall is revised for clarity and consistency.  
Column lines are being clarified to denote that the wall does not extend to column line 4, but to the shield building as shown in Tier 2 Figure 3.7.2-12, sheets 5, 6 and 10.

- N-S Shield Wall (low wall) (SW-1).
  - The Column Lines description of the wall is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
  - The Floor Elevation or Elevation Range description of the wall is revised for consistency. The upper elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
- N-S Shield Wall (SW-2).
  - The Column Lines description of the wall is revised for consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
  - The Concrete Thickness dimension of the wall is revised for clarity and consistency. The thickness dimension is revised to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
- E-W Shield Wall (SW-3).
  - The Column Lines description of the wall is revised for clarity. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3 and 4.
- Floor – From 4 to 5 and J-1 to J-2 (F-3).
  - The Column Lines description of the floor is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheet 2.
- Pipe Chase Floor – From 2 to 5 and J-1 to J-2 (PCF-1).
  - The Column Lines description of the floor is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 2, 10 and 11.
- Floor – From I to J-2 and 4 to intersecting vertical wall before column line 5 (F-9).
  - The Column Lines description of the floor is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3 and 11.
- Floor – From I to 10'-0" north of 1 and L-2 to N (F-11).
  - The Column Lines description of the floor is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 4 and 10.
- Floor – From 10'-0" north of 1 to 2 and L-2 to N (F-12).
  - The Column Lines description of the floor is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheet 4.
- Roof (R-1).
  - The Floor Elevation or Elevation Range description of the roof is revised for clarity and consistency. An upper elevation is identified to be consistent with the pitched roof shown in Tier 2 Figure 3.7.2-12, sheets 7, 8, 10 and 11.

- Floor – From 4 to short of column line 5 and from I to intersection with shield building wall (F-15).
  - The Column Lines description of the wall is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 11.
  - The Floor Elevation or Elevation Range description of the roof is revised for clarity and consistency. The thickness dimension is revised to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 11.
- Floor – From short of column line 5 to column line 5 and from I to intersection with shield building wall (F-16).
  - The Column Lines description of the wall is revised for clarity and consistency. Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 11.

**Auxiliary Building Walls/Floors Non-Radiologically Controlled section of Table 3.3-1:**

- Column Line 11 wall – From I to L (CL11-3).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency. The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 4, 5, 11 and 12.
- Column Line 11 wall – From L to Q (CL11-7).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency. The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 5, 8, and 12.
- Column Line 7.3 wall – From I to shield building (CL7.3-2).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency. The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 11.
- Column Line I wall – From 7.3 to 11 – From 100'-0" to 153'-0" (CLI-10).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency. The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 9 and 11.
- Column Line I wall – From 5 to 7.3.
  - This previous line item is removed for clarity and consistency. This line item is being removed because its location and information are incorporated into the line item included in the table above it (CLI-10).

- Column Line K wall (CLK-1).
  - The Floor Elevation or Elevation Range description of the wall is revised for consistency.  
The elevation is being clarified to denote that the wall begins at the top of the basemat (elevation 66'-6") consistent with Tier 2 Figure 3.7.2-12, sheets 1, 2, 3, 4 and 12.
- Column Line L wall (CLL-1).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency.  
The lower elevation is being clarified to show the wall begins at the top of the basemat (elevation 66'-6") consistent with Tier 2 Figure 3.7.2-12, sheets 1 through 5, 8 and 12. The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof.
- Column Line M wall (CLM-1).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency.  
The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 1 through 5.
- Column Line P wall (CLP-1).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency.  
The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 1 through 5.
- Column Line Q wall – From shield building wall to 11 – From 100'-0" to roof (CLQ-2).
  - The Floor Elevation or Elevation Range description of the wall is revised for clarity and consistency.  
The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 3, 4 and 5.
- Floor – From 5 to 7.3 and I to shield building wall (F-17).
  - The Column Lines description of the wall is revised for clarity and consistency.  
Column lines are being clarified to identify only the portion of the floor that has a 2'-0" thickness consistent with Tier 2 Figure 3.7.2-12, sheets 3, 9 and 11.
- Floor – From 10'-6" south of 7.3 to 7.3 and I to shield building wall (F-18).
  - A new line item is added to address a portion of the wall previously included in the line item above for clarity and consistency.  
This new line item is being added address the portion of the floor that has a 3'-0" thickness consistent with Tier 2 Figure 3.7.2-12, sheets 3 and 11.

- Floor – From 9.2 to 11 and L to Q (F-21).
  - The Column Lines description of the wall is revised for clarity and consistency. Column lines are being clarified to identify the Shield Building as a floor boundary, consistent with Tier 2 Figure 3.7.2-12, sheets 4, 8 and 12.

**Annex Building** section of Table 3.3-1:

- E-W Labyrinth Wall between column line 7.1 and 7.8 and G to H.
  - This line item is removed for clarity. This line item duplicates information provided two lines below it in the same table.
- N-S Labyrinth Wall between column line 7.8 and 9 and G to H (NSL-1).
  - The Applicable Radiation Shielding Wall designation is revised to include missing information. The blank is filled in to identify this wall as providing shielding consistent with the discussion in Tier 2 Subsection 12.3.1.1.2 under the heading of "Equipment Layout."
- Column Line 9 wall – From I to H (CL9-2).
  - The Column Lines description of the wall is revised for consistency. Column lines are being clarified consistent with Tier 2 Figure 3.7.2-12, sheets 2 and 3.

**Turbine Building** section of Table 3.3-1:

- Wall along Column Line 11.05 (T-4).
  - The Column Lines description of the wall is revised for clarity and consistency. Column lines are being clarified consistent with Tier 2 Figure 1.2-23 and Tier 1 Figure 3.3-11B.

**NOTES** section of Table 3.3-1:

- Generic Note 2 is revised to indicate it is "not applicable to the nuclear island basemat" for clarity and consistency. The basemat is not considered a wall or a floor in accordance with ACI-349. The tolerances for the nuclear island basemat are addressed as Tier 2\* material in Note 2 of UFSAR Table 3.8.5-3.
- Generic Notes 4 and 5 are restored to all sheets after the first sheet of the table for clarity and consistency. This is an editorial change to reflect the Notes apply for all portions of the table. At some point in the past, Notes 4 and 5 appear to have been lost from the sheets that follow the first portion of the table for the initial "Containment Building Internal Structure" entries.
- A new generic note "7" is added to indicate that column line and floor elevation or elevation range descriptions are provided as reference points to define the wall, roof or floor general location for clarity and consistency. This is consistent with the various sheets of Tier 2 Figure 3.7.2-12 and Figure 3.7.2-19.

- A new generic note "8" is added to indicate that walls that extend to the roof may vary in elevation if the roof is not at a single elevation, e.g., sloped, for clarity and consistency. This is consistent with the various sheets of Tier 2 Figure 3.7.2-12 and Figure 3.7.2-19.
- A new generic note "9" is added to indicate that wall, roof and floor concrete thicknesses may vary at transition points for clarity and consistency. This is consistent with the various sheets of Tier 2 Figure 3.7.2-12 and Figure 3.7.2-19.

### **3. Technical Evaluation**

The DCD Tier 1 proposed changes addressed herein are the result of a consistency review against corresponding Tier 2 information from which the DCD Tier 1 information was derived. There are no Tier 2 information changes associated with this LAR. The proposed changes to plant-specific DCD Tier 1 and associated COL Appendix C Table 3.3-1 are based on existing plant-specific DCD Tier 2 technical information.

The designs and functions of the associated buildings are not affected. No safety analysis is affected. The requested plant-specific Tier 1 changes are based on the existing plant design as presented in plant-specific DCD Tier 2 information and either provided for clarity to support ITAAC closures or provided for completeness.

This LAR requests changes to Tier 1 (and associated COL Appendix C) Table 3.3-1 for technical consistency, clarity and completeness. There is no change to the design, functional capabilities, method for performing a function, design analysis, safety analysis nor to plant-specific DCD Tier 2 information involved, and thus, the requested Tier 1 changes do not affect any design functions. The departure does not involve a change to the method of evaluation for establishing design bases or safety analyses. Tests, experiments and procedures described in the licensing basis were not changed by this departure. The departure does not represent a change to a design feature credited in the ex-vessel severe accident assessment.

### **4. Regulatory Evaluation**

#### **4.1 Significant Hazards Consideration**

The proposed changes would revise the plant-specific design control document (DCD) Tier 1 information (and associated COL Appendix C) in Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building," to bring the wall, roof and floor thickness descriptions into consistency with the Updated Final Safety Analysis Report (UFSAR) which includes the plant-specific DCD Tier 2 information. The Tier 1 information departure also involves a proposed amendment to corresponding information presented in Appendix C of the Vogtle Electric Generating Plant (VEGP) Units 3 and 4 combined licenses (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

Plant-specific DCD Tier 1 (and corresponding COL Appendix C) Table 3.3-1 proposed changes are for technical consistency, clarity and completeness, and do not involve a design or plant-specific DCD Tier 2 change. The changes do not affect the prevention and mitigation of any abnormal events, e.g., accidents, anticipated operational occurrences, earthquakes, floods and turbine missiles, or their safety or design analyses. The probabilistic risk assessment (plant-specific DCD Chapter 19) is not affected. No safety-related or nonsafety-related structure, system, component (SSC) or function is affected. The Tier 1 changes do not affect any SSC accident initiator or initiating sequence of events, and thus, the probabilities of the accidents evaluated in the plant-specific DCD or UFSAR are not affected. Because the changes do not involve any safety-related SSC or function used to mitigate an accident, the consequences of the accidents evaluated in the plant-specific DCD or UFSAR are not affected.

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

Plant-specific DCD Tier 1 (and corresponding COL Appendix C) Tier 1 Table 3.3-1 proposed changes are for technical consistency, clarity and completeness, and do not involve a design or plant-specific DCD Tier 2 change. No fire, design or safety analysis is affected. No system or design function or equipment qualification will be affected by the changes. The changes do not result in a new failure mode, malfunction or sequence of events that could affect safety or safety-related equipment. This activity will 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.

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

Plant-specific DCD Tier 1 (and corresponding COL Appendix C) Tier 1 Table 3.3-1 proposed changes are for technical consistency, clarity and completeness, and do not involve a design or plant-specific DCD Tier 2 change. No fire, design or safety analysis is affected. No system or design function or equipment qualification will be affected by the changes. The Table 3.3-1 building wall, roof and floor changes are only descriptive. The requested changes will not affect any safety-related equipment, design code,

function, design analysis, safety analysis input or result, or design/safety margin. No safety analysis or design basis acceptance limit/criterion is involved by the requested changes, thus, no margin of safety is reduced.

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 and 10 CFR 52.63(b)(1) require prior NRC approval for Tier 1 information departures. The changes update the plant-specific DCD Tier 1 Table 3.3-1, and thus, plant-specific Tier 1 information would be changed, and a regulatory exemption in accordance with 10 CFR 50.12 (Specific Exemptions) and NRC approval are required.

10 CFR 52, Appendix D, VIII.A.4 indicates that a design change requiring a Tier 1 change shall not result in a significant decrease in the level of safety otherwise provided by the design. The plant-specific DCD Tier 1 information changes do not represent a design change, thus, do not affect any safety-related SSC, function, design analysis or safety analysis, and do not affect the fire protection features and fire load analyses. Therefore, the requested changes will not result in a decrease in the level of safety otherwise provided by the design.

#### **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 Licenses (COLs) Numbers NPF-91 and NPF-92, for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively, to allow

departure from Tier 1 DCD information; thereby necessitating a corresponding amendment to the information presented in Appendix C of each COL. The proposed changes would revise the plant-specific DCD Tier 1 information in Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building," to bring the wall, roof and floor thicknesses into consistency with the Updated Final Safety Analysis Report (UFSAR) which includes the plant-specific DCD Tier 2 information. The Tier 1 departure information changes involve wall, floor and roof descriptions. The proposed departure from DCD Tier 1 material reflects existing, previously reviewed Tier 2 material.

The plant-specific DCD Tier 1 information changes do not represent any physical design change, thus, do not affect any plant structure, system or component, their function, plant effluent, design analysis, safety analysis, or radiation zone designations. This requested change will not change the as-built configuration of the plant. 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 involves description changes, which reflect the existing design. The Tier 1 Table 3.3-1 changes will not change the as-built configuration of the plant and thus do not 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 plant-specific DCD Tier 1 information changes do not represent any physical design change, thus, do not affect any plant structure, system or component, their

function, plant effluent, or radiation controls. This requested change will not change the as-built configuration of the plant. Consequently, these 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**

None

**Southern Nuclear Operating Company**

**ND-12-1832**

**Enclosure 2**

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

**Exemption Request**

**Regarding Tier 1 Definition of Wall Thicknesses**

Southern Nuclear Operating Company (SNC) requests an exemption from elements of the AP1000 certified (Tier 1) design information to allow changes to the definition of wall, roof and floor thicknesses for the nuclear island buildings, the annex building, and the turbine building structures, in Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Table 3.3-1.

- Table 3.3-1, Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building

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.

During recent design reviews, SNC has identified inconsistencies between the Tier 1 information providing the "definition of wall thicknesses for nuclear island building, turbine building, and annex building" and the plant-specific DCD Tier 2 information from which it was derived. The enclosed requested licensing actions that require a regulatory decision will restore the consistency of the information.

## 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 changes to detailed information that supports existing ITAAC, such as changes to wall, roof, and floor dimensions, descriptions, column line and elevation designations, and shield wall designations.

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 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) table:

### **Containment Building Internal Structures** section of Table 3.3-1:

- Shield Wall between Reactor Vessel Cavity and RCDT Room (RV-1).  
- The Column Lines description of the wall is revised.

Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheets 1, 8 & 9. The wall thickness is being clarified to be only in the section defined by the inside wall parallel with the Column Line. In addition, the location of the inside face of the wall is designated since the wall transitions at an upper elevation.

- West Reactor Vessel Cavity Wall (RV-2).
  - The Column Lines description of the wall is revised.Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheet 2. The wall thickness is being clarified to be only in the section defined by the inside wall parallel with the Column Line.
- North Reactor Vessel Cavity Wall (RV-4).
  - The Column Lines description of the wall is revised.Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheet 2. The wall thickness is clarified to be only in the section defined by the inside wall parallel with the Column Line.
- East Reactor Vessel Cavity Wall (RV-3).
  - The Column Lines description of the wall is revised.Internal walls of the Reactor Vessel Cavity are not square, but octagonal as shown in Tier 2 Figure 3.7.2-12, sheet 2. The wall thickness is being clarified to be only in the section defined by the inside wall parallel with the Column Line.
- West wall of west steam generator compartment (WSG-2).
  - The Column Lines description of the wall is revised.Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 6.
- West wall of pressurizer compartment (P-2).
  - The Column Lines description of the wall is revised.Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 6
- North wall of pressurizer compartment (P-3).
  - The Column Lines description of the wall is revised.Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 6
- East wall of pressurizer compartment (P-4).
  - The Column Lines description of the wall is revised.Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 6.
- East wall of east steam generator compartment (ESG-2).
  - The Column Lines description of the wall is revised.Column line information is being added to clarify the orientation of the walls, to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 9.
- North wall of east steam generator compartment (ESG-3).
  - The Floor Elevation or Elevation Range description of the wall is revised.The height information is being updated to be as shown in Tier 2 Figure 3.7.2-12, sheets 6 and 9. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 2, 3, 4 and 5.

**Auxiliary Building Walls/Floors Radiologically Controlled section of Table 3.3-1:**

- Column Line 2 wall – From L-2 to N (CL2-3).
  - The Floor Elevation or Elevation Range description of the wall is revised. The lower elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheet 2. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 3, 4 and 5.
- Column Line 4 wall – From I to J-1 (CL4-1).
  - The Floor Elevation or Elevation Range description of the wall is revised. The upper elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 4, 5 and 11. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 1, 2 and 3.
- Column Line 7.1 wall – From I to 8' East of J-1 (CL7-1).
  - The Wall or Section Description of the wall is revised. The wall location is being updated in accordance with Tier 2 Figure 3.7.2-12, sheet 1. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
- Column Line 7.2 wall – From I to 5'-6" East of J-1 (CL7-2).
  - The Wall or Section Description of the wall is revised. The wall location is being updated in accordance with Tier 2 Figure 3.7.2-12, sheet 1. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
  - The Floor Elevation or Elevation Range description of the wall is revised. Elevation information is being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheet 1. A portion of the line item is split into a new line discussed below. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
- Wall South of Column Line 7.3 – From I to just east of J – From 82'-6" to 100'-0" (CL7-3).
  - A new line item is added with a slightly revised Column Line description. This new line item is being separated by elevation for clarity to show that the wall length is not the same on each elevation as shown in Tier 2 Figure 3.7.2-12, sheets 1 and 2. This wall is also shown on Tier 2 Figure 3.7.2-12, sheet 11.
- Column Line I wall – From 1 to 4 - From 66'-6" to 100'-0" (CLI-1).
  - The Column Lines description of the wall is revised. Column lines are being clarified to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2 and 11. Portions of this line item are included in new line items discussed below. (It should be noted that Sheet 11 does not actually show Column Line I but is an appropriate figure to fully represent the wall.)
- Column Line I wall – From 3 to 4 - From 100'-0" to 107'-2" (CLI-2).
  - A new line item is included to clarify the wall thickness in this area. The wall thickness is revised to as shown in Tier 2 Figure 3.7.2-12, sheets 3 and 11.
- Column Line I wall – From 4 to 16'-0" south of 5 – From 66'-6" to 107'-2" (CLI-3).
  - A new line item is added to address a portion of a revised item from above. This new line item is being added for clarity to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2, 3 and 11.



Exemption Request: Tier 1 Definition of Wall Thicknesses

- Column Line I wall – From 16'-0" south of 5 to 5 – From 66'-6" to 105'-0" (CLI-4).  
- A new line item is added to address a portion of a revised item from above.  
This new line item is being added for clarity to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2 and 11.
- Column Line I wall – From 5 to 7.3 – From 66'-6" to 100'-0" (CLI-5).  
- A new line item is added to address a portion of a revised item from above.  
This new line item is being added for clarity to show that the wall thickness extends to floors at elevations shown in Tier 2 Figure 3.7.2-12, sheets 1, 2, 9 and 11.
- Column Line I wall – From 1 to 3 – From 100'-0" to roof (CLI-6).  
- A new line item is added to address a portion of a deleted item discussed below.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 11.
- Column Line I wall – From 3 to 4 – From 107'-2" to roof (CLI-7).  
- A new line item is added to address a portion of a deleted item discussed below.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 11.
- Column Line I wall – From 4 to 16'-0" south of 5 – From 107'-2" to roof (CLI-8).  
- A new line item is added to address a portion of a deleted item discussed below.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 11.
- Column Line I wall – From 16'-0" south of 5 to 5 – From 105'-0" to roof (CLI-9).  
- A new line item is added to address a portion of a deleted item discussed below.  
This new line item is being added for clarity to show that the wall thickness extends from the floor at the specified elevation to the roof as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4, 5 and 11.
- Column Line I wall – From 1 to 4 – From 100'-0" to 180'-0".  
- This previous line item is removed.  
This line item is being removed because its location and information are addressed by the Column Line I wall items included above (CLI-2, CLI-6 and CLI-7).
- Column Line I wall – From 4 to 5 – From 100'-0" to 160'-6".  
- This previous line item is removed.  
This line item is being removed because its location and information are addressed by the Column Line I wall items included above (CLI-3, CLI-4, CLI-8 and CLI-9).
- Column Line N wall – From 1 to 12'-9" north of 1 – From 100'-0" to 125'-0" (CLN-2).  
- The Applicable Radiation Shield Wall description is revised.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I." This wall is shown on Figure 3.7.2-12, sheets 3 and 10.

- Column Line N wall – From 1 to 12'-9" north of 1 – From 125'-0" to 135'-3" (CLN-3).
  - The Floor Elevation or Elevation Range description of the wall is revised.  
The upper elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 4 and 10.
  - The Applicable Radiation Shield Wall description is revised.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I."
- Column Line N wall – From 12'-9" north of 1 to 2 – From 100'-0" to 118'-2½" (CLN-4).
  - The Applicable Radiation Shield Wall description is revised.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I." This wall is shown on Figure 3.7.2-12, sheet 3.
- Column Line N wall – From 12'-9" north of 1 to 2 – From 118'-2½" to 135'-3" (CLN-5).
  - The Applicable Radiation Shield Wall description is revised.  
The "No" is being updated to be consistent with Tier 2 Subsection 12.3.2.2.4 which indicates that the "building external walls are sufficient to shield external plant areas which are not controlled to Zone I." This wall is shown on Figure 3.7.2-12, sheet 4.
- Column Line N wall – From 1 to 2 – From 118'-2 1/2" to 135'-3".
  - This previous line item is removed.  
This line item is being removed because its location and information are addressed by the other line items included in the table above (CLN-2, CLN-3 and CLN-5).
- Column Line N wall – From 2 to 4 – From 66'-6" to 98'-1" (CLN-6).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to denote that the wall does not extend to column line 4, but to the shield building as shown in Tier 2 Figure 3.7.2-12, sheets 1 and 2.
  - The Concrete Thickness dimension is revised.  
The wall thickness is updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 1, 2 and 10.
- Column Line N wall – From 2 to 4 – From 98'-1" to 135'-3" (CLN-7).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to denote that the wall does not extend to column line 4, but to the shield building as shown in Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
- Column Line N wall – From 1 to 4 – From 135'-3" to 180'-0" (CLN-8).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to denote that the wall does not extend to column line 4, but to the shield building as shown in Tier 2 Figure 3.7.2-12, sheets 5, 6 and 10.
- N-S Shield Wall (low wall) (SW-1).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
  - The Floor Elevation or Elevation Range description of the wall is revised.  
The upper elevation is being updated to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.

- N-S Shield Wall (SW-2).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
  - The Concrete Thickness dimension of the wall is revised.  
The thickness dimension is revised to be consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4 and 10.
- E-W Shield Wall (SW-3).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3 and 4.
- Floor – From 4 to 5 and J-1 to J-2 (F-3).
  - The Column Lines description of the floor is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheet 2.
- Pipe Chase Floor – From 2 to 5 and J-1 to J-2 (PCF-1).
  - The Column Lines description of the floor is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 2, 10 and 11.
- Floor – From I to J-2 and 4 to intersecting vertical wall before column line 5 (F-9).
  - The Column Lines description of the floor is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 3 and 11.
- Floor – From I to 10'-0" north of 1 and L-2 to N (F-11).
  - The Column Lines description of the floor is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 4 and 10.
- Floor – From 10'-0" north of 1 to 2 and L-2 to N (F-12).
  - The Column Lines description of the floor is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheet 4.
- Roof (R-1).
  - The Floor Elevation or Elevation Range description of the roof is revised.  
An upper elevation is identified to be consistent with the pitched roof shown in Tier 2 Figure 3.7.2-12, sheets 7, 8, 10 and 11.
- Floor – From 4 to short of column line 5 and from I to intersection with shield building wall (F-15).
  - The Column Lines description of the wall is revised.  
Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 11.
  - The Floor Elevation or Elevation Range description of the roof is revised.  
The thickness dimension is revised to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 11.

- Floor – From short of column line 5 to column line 5 and from I to intersection with shield building wall (F-16).
  - The Column Lines description of the wall is revised.Column lines are being clarified to be consistent with Tier 2 Figure 3.7.2-12, sheets 5 and 11.

**Auxiliary Building Walls/Floors Non-Radiologically Controlled section of Table 3.3-1:**

- Column Line 11 wall – From I to L (CL11-3).
  - The Floor Elevation or Elevation Range description of the wall is revised.The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 4, 5, 11 and 12.
- Column Line 11 wall – From L to Q (CL11-7).
  - The Floor Elevation or Elevation Range description of the wall is revised.The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 5, 8, and 12.
- Column Line 7.3 wall – From I to shield building (CL7.3-2).
  - The Floor Elevation or Elevation Range description of the wall is revised.The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 6 and 11.
- Column Line I wall – From 7.3 to 11 – From 100'-0" to 153'-0" (CLI-10).
  - The Floor Elevation or Elevation Range description of the wall is revised.The elevation is being clarified to denote that there is a sloped roof, consistent with Tier 2 Figure 3.7.2-12, sheets 3, 4, 5, 9 and 11.
- Column Line I wall – From 5 to 7.3.
  - This previous line item is removed.This line item is being removed because its location and information are incorporated into the line item included in the table above it (CLI-10).
- Column Line K wall (CLK-1).
  - The Floor Elevation or Elevation Range description of the wall is revised.The elevation is being clarified to denote that the wall begins at the top of the basemat (elevation 66'-6") consistent with Tier 2 Figure 3.7.2-12, sheets 1, 2, 3, 4 and 12.
- Column Line L wall (CLL-1).
  - The Floor Elevation or Elevation Range description of the wall is revised.The lower elevation is being clarified to show the wall begins at the top of the basemat (elevation 66'-6") consistent with Tier 2 Figure 3.7.2-12, sheets 1 through 5, 8 and 12. The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof.

- Column Line M wall (CLM-1).
  - The Floor Elevation or Elevation Range description of the wall is revised. The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 1 through 5.
- Column Line P wall (CLP-1).
  - The Floor Elevation or Elevation Range description of the wall is revised. The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 1 through 5.
- Column Line Q wall – From shield building wall to 11 – From 100'-0" to roof (CLQ-2).
  - The Floor Elevation or Elevation Range description of the wall is revised. The upper elevation is being clarified to denote that the wall extends to the sloped roof consistent with Tier 2 Figure 3.7.2-12, sheet 12. A specific elevation is not appropriate for a sloped roof. This wall is also shown on Tier 2 Figure 3.7.2-12, sheets 3, 4 and 5.
- Floor – From 5 to 7.3 and I to shield building wall (F-17).
  - The Column Lines description of the wall is revised. Column lines are being clarified to identify only the portion of the floor that has a 2'-0" thickness consistent with Tier 2 Figure 3.7.2-12, sheets 3, 9 and 11.
- Floor – From 10'-6" south of 7.3 to 7.3 and I to shield building wall (F-18).
  - A new line item is added to address a portion of the wall previously included in the line item above. This new line item is being added address the portion of the floor that has a 3'-0" thickness consistent with Tier 2 Figure 3.7.2-12, sheets 3 and 11.
- Floor – From 9.2 to 11 and L to Q (F-21).
  - The Column Lines description of the wall is revised. Column lines are being clarified to identify the Shield Building as a floor boundary, consistent with Tier 2 Figure 3.7.2-12, sheets 4, 8 and 12.

**Annex Building section of Table 3.3-1:**

- E-W Labyrinth Wall between column line 7.1 and 7.8 and G to H.
  - This line item is removed. This line item duplicates information provided two lines below it in the same table.
- N-S Labyrinth Wall between column line 7.8 and 9 and G to H (NSL-1).
  - The Applicable Radiation Shielding Wall designation is revised. The blank is filled in to identify this wall as providing shielding consistent with the discussion in Tier 2 Subsection 12.3.1.1.2 under the heading of "Equipment Layout."
- Column Line 9 wall – From I to H (CL9-2).
  - The Column Lines description of the wall is revised. Column lines are being clarified consistent with Tier 2 Figure 3.7.2-12, sheets 2 and 3.

**Turbine Building** section of Table 3.3-1:

- Wall along Column Line 11.05 (T-4).  
- The Column Lines description of the wall is revised.  
Column lines are being clarified consistent with Tier 2 Figure 1.2-23 and Tier 1 Figure 3.3-11B.

**NOTES** section of Table 3.3-1:

- Generic Note 2 is revised to indicate it is “not applicable to the nuclear island basemat.” The basemat is not considered a wall or a floor in accordance with ACI-349. The tolerances for the nuclear island basemat are addressed as Tier 2\* material in Note 2 of UFSAR Table 3.8.5-3.
- Generic Notes 4 and 5 are restored to all sheets after the first sheet of the table. This is an editorial change to reflect the Notes apply for all portions of the table. At some point in the past, Notes 4 and 5 appear to have been lost from the sheets that follow the first portion of the table for the initial “Containment Building Internal Structure” entries.
- A new generic note “7” is added to clarify that column line and floor elevation or elevation range descriptions are provided as reference points to define the wall, roof or floor general location. This is consistent with the various sheets of Tier 2 Figure 3.7.2-12 and Figure 3.7.2-19.
- A new generic note “8” is added to clarify that walls that extend to the roof may vary in elevation if the roof is not at a single elevation, e.g., sloped. This is consistent with the various sheets of Tier 2 Figure 3.7.2-12 and Figure 3.7.2-19.
- A new generic note “9” is added to clarify that wall, roof and floor concrete thicknesses may vary at transition points. This is consistent with the various sheets of Tier 2 Figure 3.7.2-12 and Figure 3.7.2-19.

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 authorizes 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 structures, departures from the details identified in Tier 1 information were determined necessary to be consistent with the layout of structures as described in the plant-specific DCD Tier 2 information. This activity requests exemption from the generic DCD Tier 1 Table 3.3-1, which supports the associated COL Appendix C ITAAC.

Various changes are requested to the Tier 1 Table 3.3-1 information to be consistent with the plant-specific DCD Tier 2 (UFSAR) Figure 1.2-23, Tier 2 Figure 3.7.2-12, Tier 2 Figure 3.7.2-19, Tier 2 Subsection 12.3.1.1.2 text, and Tier 2 Subsection 12.3.2.2.4 text. The identified plant-specific DCD Tier 2 figures are utilized to clarify and supplement the information that describes the Wall or Section Descriptions, Column Lines designations, Floor Elevation or Elevation Range designations, and the Concrete Thickness designations, as well as the addition of new clarifying notes. The identified plant-specific DCD Tier 2 text is utilized to identify several additional walls as an Applicable Radiation Shielding Wall.

## 3.0 Technical Justification of Acceptability

An exemption is requested to depart from AP1000 generic Design Control Document (DCD) Tier 1 material in regard to the AP1000 structures and layout by changing the Wall or Section Descriptions, Column Lines designations, Floor Elevation or Elevation Range designations, and the Concrete Thickness designations, as well as the addition of new clarifying notes, in Tier 1 Table 3.3-1. The proposed exemption would allow a change to the plant-specific Tier 1 non-system-based ITAAC information consistent with existing plant-specific DCD Tier 2 information.

The ITAAC that provide verification that the building elements related to this activity are provided to confirm the structures are constructed in accordance with the approved design. Descriptions (in the ITAAC table) of the structures that are inconsistent with the design reviewed and approved as part of the plant-specific DCD Tier 2 safety analysis do not serve the underlying purpose of the ITAAC.

The proposed changes to the description information presented in plant-specific Tier 1 Table 3.3-1 are at a level of detail that is consistent with the information currently provided therein. The proposed changes neither adversely impact the ability to meet the design functions of the structures nor involve a significant decrease in the level of safety provided by the structure. Because the proposed descriptions of the structural elements are consistent with plant-specific DCD Tier 2 information, the changes do not affect a structure, system or component. The proposed changes to information in plant-specific DCD Tier 1 Table 3.3-1 continue to provide the detail necessary to implement the corresponding ITAAC. Further, 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 since it could be read inconsistent with the existing design information provided in Tier 2 of the plant-specific DCD.

Therefore, the revised plant-specific Tier 1 information will serve the underlying purpose of the rule (10 CFR 52, Appendix D, Section III.B), following approval of the proposed exemption.

#### **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 structures as a result of further design review 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 description of the 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 DCD Tier 1 information, to depart from the AP1000 certified design information. The plant-specific DCD Tier 1 information will 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 serve its required purpose.

The changes to the descriptions of the structures do not add, delete, or modify systems or equipment as described in Tier 1 of the AP1000 DCD. These changes will not impact the ability of the structures to perform their design functions, which include providing radiation shielding. Because the structure description changes will not 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 structures description 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 structure descriptions as presented in a non-system-based ITAAC table in the plant-specific Tier 1 DCD, thereby departing from the AP1000 certified design information. The proposed exemption will enable performance of the ITAAC associated with these changed elements, by reflecting consistent, clarified description information in the text, tables, and figures that are referenced in these ITAAC. The exemption 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 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 provide ITAAC that accurately reflect the plant design, such that the ITAAC are adequate to verify the construction of the approved design. The proposed changes to the Tier 1 information are necessary to accurately and consistently reflect the proposed plant-specific information in the associated Tier 1 Inspections, Tests, Analyses, and Acceptance Criteria. If this exemption is not granted, then the ITAAC in Tier 1 would not conform to the plant-specific DCD Tier 2 design descriptions, and the performance of the Tier 1 ITAAC would not accurately verify construction of the proposed design. Therefore, in order to achieve the underlying purpose of the plant-specific Tier 1 information, the text, tables, and figures that support the Tier 1 ITAAC must accurately reflect the proposed design.

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 proposed 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 ITAAC table. Based on the nature of the proposed changes to the generic Tier 1 information and the understanding that these changes were identified during a design review 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 structures 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 demonstrate that the change from the standard information provided in the generic AP1000 DCD 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 structures descriptions as presented in a non-system-based ITAAC table. The level of safety presented by plant structures is defined by the ability of these structures to protect the SSCs contained within these structures from external hazards (presented by both man-made hazards and natural phenomena) and to minimize the propagation of hazards generated internally to the degree practical.

The change to the structure descriptions for consistency and clarity will not impact the functional capabilities of the structures. Because the design 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 structures and the systems and equipment contained therein will be unchanged. Because the proposed changes to the structure descriptions will not adversely affect the ability of the structures to perform their design functions and the level of safety provided by the structures and the systems and equipment contained therein is unchanged, it is concluded that the description changes 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 ITAAC table in the plant-specific Tier 1 DCD to reflect consistent plant-specific design. The proposed exemption would allow departure from AP1000 generic Tier 1 DCD information by changing the descriptions of various walls, roof, and floor elements in the Nuclear Island Buildings, Turbine Building, and Annex Building. 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 Part 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 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 existing plant-specific DCD Tier 2 material.

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), in that:

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

As documented in Section 4.1, Significant Hazards Consideration, of the license amendment request associated with this licensing activity an evaluation was completed to

determine whether or not a significant hazards consideration is involved with the proposed amendment 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. Based on the above, it was 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" was justified for the license amendment request. Because the Tier 1 departures from the certified design that are associated with the proposed exemption request simply reflect the Tier 1 departures in the proposed license amendment the evaluation and conclusions reached in the significant hazards consideration for the license amendment request are equally applicable to this exemption request. Therefore, it is concluded that the proposed exemption 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 for this exemption request.

- (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 changes to the structures descriptions are unrelated to 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 exemption does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

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

The proposed changes to the structures descriptions have no effect on individual or cumulative occupational radiation exposure during plant operation. Therefore, it is concluded that the proposed exemption does not involve a significant increase in individual or cumulative occupational radiation exposure.

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.

## 9.0 References

None

**Southern Nuclear Operating Company**

**ND-12-1832**

**Enclosure 3**

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

**Proposed Changes to Licensing Basis Documents  
(LAR-12-008)**

**Plant-specific DCD Tier 1, Table 3.3-1 “Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building” (beginning on Tier 1 page 3.3-5) and VEGP Unit 3 and Unit 4 COLs, Appendix C, Table 3.3-1 (beginning on page C-412)**

Each Table 3.3-1 is revised to read:

Table 3.3-1 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building(1)				
Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
<b>Containment Building Internal Structure</b>				
Shield Wall between Reactor Vessel Cavity and RCDT Room	E-W wall parallel with column line 7 (Inside face is 3'-0" north of column line 7. Width of wall section with stated thickness is defined by inside wall of reactor vessel cavity.)	From 71'-6" to 83'-0"	3'-0"	Yes
West Reactor Vessel Cavity Wall	N-S wall parallel with column line N (Width of wall section with stated thickness is defined by inside wall of reactor vessel cavity.)	From 83'-0" to 98'-0"	7'-6"	Yes
North Reactor Vessel Cavity Wall	E-W wall parallel with column line 7 (Width of wall section with stated thickness is defined by inside wall of reactor vessel cavity.)	From 83'-0" to 98'-0"	9'-0"	Yes

1. The column lines and floor elevations are identified and included on Figures 3.3-1 through 3.3-13.
2. These wall (and floor) thicknesses have a construction tolerance of ±1 inch, except for exterior walls below grade where the tolerance is +12 inches, -1 inch. **These tolerances are not applicable to the nuclear island basemat.**
3. For walls that are part of structural modules, the concrete thickness also includes the steel face plates.
4. For floors with steel surface plates, the concrete thickness also includes the plate thickness.
5. Where a wall (or a floor) has openings, the concrete thickness does not apply at the opening.
6. The elevation ranges for the shield building items are rounded to the nearest inch.
7. **The Wall or Section Description, Column Line information, and Floor Elevation or Elevation Ranges are provided as reference points to define the general location. The concrete thickness of an item intersecting other walls, roofs or floors at a designated location (e.g., column line) is not intended to be measured to the stated column line, but only to the point where the intersection occurs.**
8. Where applicable, the upper wall portions extend to their associated roofs, which may vary in elevation, e.g., sloped roofs.
9. From one wall/floor section to another, the concrete thickness transitions from one thickness to another, consistent with the configurations in Figures 3.3-1 through 3.3-14.

**Table 3.3-1  
Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
East Reactor Vessel Cavity Wall	N-S wall parallel with column line N <i>(Width of wall section with stated thickness is defined by inside wall of reactor vessel cavity.)</i>	From 83'-0" to 98'-0"	7'-6"	Yes
West Refueling Cavity Wall	N-S wall parallel with column line N	From 98'-0" to 135'-3"	4'-0"	Yes
North Refueling Cavity Wall	E-W wall parallel with column line 7	From 98'-0" to 135'-3"	4'-0"	Yes
East Refueling Cavity Wall	N-S wall parallel with column line N	From 98'-0" to 135'-3"	4'-0"	Yes
South Refueling Cavity Wall	E-W wall parallel with column line 7	From 98'-0" to 135'-3"	4'-0"	Yes
South wall of west steam generator compartment	Not Applicable	From 103'-0" to 153'-0"	2'-6"	Yes
West wall of west steam generator compartment	<b>Not Applicable</b> N-S wall parallel with column line N	From 103'-0" to 153'-0"	2'-6"	Yes
North wall of west steam generator compartment	Not Applicable	From 103'-0" to 153'-0"	2'-6"	Yes
South wall of pressurizer compartment	Not Applicable	From 103'-0" to 153'-6"	2'-6"	Yes
West wall of pressurizer compartment	<b>Not Applicable</b> N-S wall parallel with column line N	From 107'-2" to 160'-0"	2'-6"	Yes
North wall of pressurizer compartment	<b>Not Applicable</b> E-W wall parallel with column line 7	From 107'-2" to 160'-0"	2'-6"	Yes
East wall of pressurizer compartment	<b>Not Applicable</b> N-S wall parallel with column line N	From 118'-6" to 160'-0"	2'-6"	Yes
North-east wall of in-containment refueling water storage tank	Parallel to column line N	From 103'-0" to 135'-3"	2'-6"	No
West wall of in-containment refueling water storage tank	Not applicable	From 103'-0" to 135'-3"	5/8" steel plate with stiffeners	No
South wall of east steam generator compartment	Not Applicable	From 87'-6" to 153'-0"	2'-6"	Yes
East wall of east steam generator compartment	<b>Not Applicable</b> N-S wall parallel with column line N	From 94'-0" to 153'-0"	2'-6"	Yes
North wall of east steam generator compartment	Not Applicable	From 87'-6" to 153'-0" <i>with a 158'-0" portion</i>	2'-6"	Yes

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**Table 3.3-1 (cont.)  
 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
<b>Shield Building<sup>(6)</sup></b>				
Shield Building Cylinder	Not Applicable	From 100'-0" to 248'-6"	3'-0" (including 3/4 inch thick min. steel plate liner on each face on portion not protected by auxiliary building)	Yes
Air Inlet	Not Applicable	From 248'-6" to 251'-6"	3'-0" (including 3/4 inch thick min. steel plate liner on each face)	Yes
		From 251'-6" to 254'-6"	3'-0" to 4'-6" (including 1 inch thick steel plate liner on each face)	Yes
		From 254'-6" to 266'-4"	4'-6" (including 1 inch thick min. steel plate liner on each face)	Yes
Tension Ring	Not Applicable	From 266'-4" to 271'-6" (at top of plate)	4'-6" (including 1-1/2 inch thick steel plate liner on each face)	Yes
Conical Roof	Not Applicable	From 271'-6" to 293'-9"	3'-0" (including 1/2 inch thick min. steel plate liner on bottom face, outside of PCS tank exterior wall)	Yes
PCS Tank External Cylindrical Wall	Not Applicable	From 293'-9" to 328'-9"	2'-0"	Yes
PCS Tank Internal Cylindrical Wall	Not Applicable	From 309'-4" to 329'-0"	1'-6"	Yes
PCS Tank Roof	Not Applicable	328'-9" (Lowest) 329'-0" (Highest)	1'-3"	No
Nuclear Island Basemat	Below shield building	From 60'-6" to containment vessel or 82'-6"	6'-0" to 22'-0" (varies)	No



**Table 3.3-1 (cont.)  
Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
<b>Auxiliary Building Walls/Floors Radiologically Controlled</b>				
Column Line 1 wall	From I to N	From 66'-6" to 100'-0"	3'-0"	No
Column Line 1 wall	From I to 5'-6" east of L-2	From 100'-0" to 180'-0"	2'-3"	Yes
Column Line 1 wall	From 5'-6" east of L-2 to N	From 100'-0" to 125'-0"	3'-0"	Yes
Column Line 1 wall	From 5'-6" east of L-2 to N	From 125'-0" to 180'-0"	2'-3"	Yes
Column Line 2 wall	From I to K-2	From 66'-6" to 135'-3"	2'-6"	Yes
Column Line 2 wall	From K-2 to L-2	From 66'-6" to 135'-3"	5'-0"	Yes
Column Line 2 wall	From L-2 to N	From <del>98'-1"</del> 82'-6" to 135'-3"	2'-6"	Yes
Column Line 2 wall	From I to J-1	From 135'-3" to 153'-0"	2'-0"	Yes
Column Line 3 wall	From J-1 to J-2	From 66'-6" to 82'-6"	2'-6"	Yes
Column Line 3 wall	From J-1 to J-2	From 100'-0" to 135'-3"	2'-6"	Yes
Column Line 3 wall	From J-2 to K-2	From 66'-6" to 135'-3"	2'-6"	Yes
Column Line 3 wall	From K-2 to L-2	From 66'-6" to 92'-8 1/2"	2'-6"	Yes
Column Line 4 wall	From I to J-1	From 66'-6" to <del>135'-3"</del> <del>153'-0"</del>	2'-6"	Yes
Column Line 4 wall	From J-1 to J-2	From 66'-6" to 92'-6"	2'-6"	Yes
Column Line 4 wall	From J-1 to J-2	From 107'-2" to 135'-3"	2'-6"	Yes
Column Line 4 wall	From J-2 to K-2	From 66'-6" to 135'-3"	2'-6"	Yes
Column Line 4 wall	From I to intersection with shield building wall	From 135'-3" to 180'-0"	2'-0"	Yes
Column Line 5 wall	From I to shield building; with opening east of J-1 (below 107'-2" floor).	From 66'-6" to 160'-6"	2'-0"	Yes
<del>Wall, 17'-3" north of Column Line 7.1 wall</del>	From I to 8' east of J-1	From 66'-6" to 82'-6"	2'-0"	Yes
<del>Wall, 10'-6" south of Column Line 7.32 wall</del>	From I to 5'-6" east of J-1	From 66'-6" to <del>82'-6"</del> <del>100'-0"</del>	2'-0"	Yes
<del>Wall, 10'-6" south of Column Line 7.32 wall</del>	<del>From I to 5'-6" just east of J-1</del>	<del>From 66'-82'-6" to 100'-0"</del>	<del>2'-0"</del>	<del>Yes</del>
Column Line I wall	From I to <del>4 7.3</del>	From 66'-6" to 100'-0"	3'-0"	No
Column Line I wall	From 3 to 4	From 100'-0" to 107'-2"	3'-0"	Yes

**Table 3.3-1 (cont.)  
 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
Column Line I wall	From 4 to 16'-0" south of 5	From 66'-6" to 107'-2"	3'-0"	No
Column Line I wall	From 16'-0" south of 5 to 5	From 66'-6" to 105'-0"	3'-0"	No
Column Line I wall	From 5 to 7.3	From 66'-6" to 100'-0"	3'-0"	No
Column Line I wall	From 1 to 3	From 100'-0" to roof	2'-0"	Yes
Column Line I wall	From 3 to 4	From 107'-2" to roof	2'-0"	Yes
Column Line I wall	From 4 to 16'-0" south of 5	From 107'-2" to roof	2'-0"	No
Column Line I wall	From 16'-0" south of 5 to 5	From 105'-0" to roof	2'-0"	No
<del>Column Line I wall</del>	<del>From 1 to 4</del>	<del>From 100'-0" to 180'-0"</del>	<del>2'-0"</del>	<del>Yes</del>
<del>Column Line I wall</del>	<del>From 4 to 5</del>	<del>From 100'-0" to 160'-6"</del>	<del>2'-0"</del>	<del>No</del>
Column Line J-1 wall	From 1 to 2	From 82'-6" to 100'-0"	2'-0"	Yes
Column Line J-1 wall	From 2 to 4	From 66'-6" to 135'-3"	2'-6"	Yes
Column Line J-1 wall	From 2 to 4	From 135'-3" to 153'-0"	2'-0"	Yes
Column Line J-1 wall	From 4 to shield building	From 66'-6" to 107'-2"	2'-0"	Yes
Column Line J-2 wall	From 2 to 4	From 66'-6" to 135'-3"	2'-6"	Yes
Column Line J-2 wall	From 4 to intersection with shield building wall	From 66'-6" to 135'-3"	2'-0"	Yes
Column Line K-2 wall	From 2 to 4	From 66'-6" to 135'-3"	4'-9"	Yes
Column Line L-2 wall	From 2 to 4	From 66'-6" to 135'-3"	4'-0"	Yes
Column Line N wall	From 1 to 2	From 66'-6" to 100'-0"	3'-0"	No
Column Line N wall	From 1 to 12'-9" north of 1	From 100'-0" to 125'-0"	3'-9"	Yes No
Column Line N wall	From 1 to 12'-9" north of 1	From 125'-0" to 135'-3" <del>0"</del>	2'-0"	Yes No
Column Line N wall	From 12'-9" north of 1 to 2	From 100'-0" to 118'-2 1/2"	3'-0"	Yes No
Column Line N wall	From 12'-9" north of 1 to 2	From 118'-2 1/2" to 135'-3"	2'-0"	Yes No
<del>Column Line N wall</del>	<del>From 1 to 2</del>	<del>From 118'-2 1/2" to 135'-3"</del>	<del>2'-0"</del>	<del>Yes</del>
Column Line N wall	From 2 to 4 (or to shield building)	From 66'-6" to 98'-1"	<del>3'-0"</del> 5'-6"	No
Column Line N wall	From 2 to 4 (or to shield building)	From 98'-1" to 135'-3"	5'-6"	Yes
Column Line N wall	From 1 to 4 (or to shield building)	From 135'-3" to 180'-0"	2'-0"	Yes

**Table 3.3-1 (cont.)  
Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
Labyrinth Wall between Col. Line 3 and 4 and J-1 to 7'-3" from J-2	Not Applicable	From 82'-6" to 92'-6"	2'-6"	Yes
N-S Shield Wall (low wall)	<del>Between K-2 and L-2</del> <b>Between 5'-7" west of column line K-2 and L-2</b> extending 16'-0" from column line 1 north	From 100'-0" to 110'-0" <del>107'-2"</del>	2'-6"	Yes
N-S Shield Wall	<del>Between K-2 and L-2</del> <b>Between K-2 and 2'-9" east of column line L-2</b> extending 12'-9" from column line 1 north	From 100'-0" to 125'-0"	<del>2'-9"</del> <b>2'-9" <del>3"</del></b>	Yes
E-W Shield Wall	Between 1 and 2 extending <b>16'-3"</b> from column line N east	From 100'-0" to 125'-0"	2'-9"	Yes
Auxiliary Area Basemat	From 1-7.3 and I-N, excluding shield building	From 60'-6" to 66'-6"	6'-0"	No
Floor	From 1 to 2 and I to N	82'-6"	2'-0"	Yes
Floor	From 2 to 4 and J-1 to J-2	82'-6"	2'-0"	Yes
Floor	From 4 north to the shield building ending 17'-4" south of column line 5 and J-1 to J-2	82'-6"	0'-9"	Yes
Pipe Chase Floor	From 2 north to the shield building ending 17'-4" south of column line 5 and J-1 to J-2	92'-6"	2'-0"	Yes
Floor	From 2 to 3 and J-2 to K-2	90'-3"	3'-0"	Yes
Floor	From 3 to 4 and J-2 to K-2	92'-6"	2'-0"	Yes
Floor	From 4 to 7.3 and I to J-1	82'-6"	2'-0"	Yes
Floor	From 1 to 2 and I to N	100'-0"	3'-0"	Yes
Floor	From 2 to 4 and K-2 to L-2	92'-8 1/2"	3'-2 1/2"	Yes
Floor	From I to J-2 and 4 to <del>intersecting shield building and vertical wall 17'-0" south of before</del> <b>intersecting shield building and vertical wall 17'-0" south of before</b> column line 5	107'-2"	2'-0"	Yes
Floor	From I to shield building wall and from intersecting vertical wall before column line 5 to column line 5	105'-0"	0'-9"	Yes

**Table 3.3-1 (cont.)  
 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
Floor	From column line 1 to 10'-0" north of column line 1 and from 2'-9" east of column line L-2 to N	125'-0"	3'-0"	Yes
Floor	From <del>4'-0"</del> 12'-9" north of column lines 1 to 2 and from 2'-9" east of column lines L-2 to N	118'-2 1/2"	2'-0"	Yes
Floor	From 3 to 4 and J-2 to K-2	117'-6"	2'-0"	Yes
Floor	From 2 to 4 and I to J-1	153'-0"	0'-9"	Yes
Roof	From 1 to 4 and I to N	180'-0" to 180'-9"	1'-3"	Yes
Floor	From 4 to 16'-0" south <del>short</del> of column line 5 and from I to intersection with shield building wall	135'-3" <del>5"</del>	0'-9"	Yes
Floor	From 16'-0" south <del>short</del> of column line 5 to column line 5 and from I to intersection with shield building wall	133'-0"	0'-9"	Yes
<b>Auxiliary Building Walls/Floors Non-Radiologically Controlled</b>				
Column Line 11 wall	From I to Q	From 66'-6" to 100'-0"	3'-0"	No
Column Line 11 wall	From I to Q	From 100'-0" to 117'-6"	2'-0"	Yes
Column Line 11 wall	From I to L	From 117'-6" to roof <del>153'-0"</del>	2'-0"	Yes
Column Line 11 wall	From L to M	From 117'-6" to 135'-3"	4'-0"	Yes
Column Line 11 wall	From M to P	From 117'-6" to 135'-3"	2'-0"	Yes
Column Line 11 wall	From P to Q	From 117'-6" to 135'-3"	4'-0"	Yes
Column Line 11 wall	From L to Q	From 135'-3" to roof <del>153'-0"</del>	2'-0"	Yes
Column Line 7.3 wall	From I to shield building	From 66'-6" to 100'-0"	3'-0"	Yes
Column Line 7.3 wall	From I to shield building	From 100'-0" to roof <del>160'-6"</del>	2'-0"	No
Column Line I wall	From 7.3 to 11	From 66'-6" to 100'-0"	3'-0"	No
Column Line I wall	From <del>7.3-5</del> to 11	From 100'-0" to roof <del>153'-0"</del>	2'-0"	No
<del>Column Line I wall</del>	<del>From 5 to 7.3</del>	<del>From 100'-0" to 160'-6"</del>	<del>2'-0"</del>	<del>No</del>

**Table 3.3-1 (cont.)  
 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
Column Line J wall	From 7.3 to 11	From 66'-6" to 117'-6"	2'-0"	No
Column Line K wall	From 7.3 to 11	From <del>66'-6"</del> <del>60'-6"</del> to 135'-3"	2'-0"	Yes
Column Line L wall	From shield building wall to 11	From <del>66'-6"</del> <del>60'-6"</del> to roof <del>153'-0"</del>	2'-0"	Yes
Column Line M wall	From shield building wall to 11	From 66'-6" to roof <del>153'-0"</del>	2'-0"	Yes
Column Line P wall	From shield building wall to 11	From 66'-6" to roof <del>153'-0"</del>	2'-0"	Yes
Column Line Q wall	From shield building wall to 11	From 66'-6" to 100'-0"	3'-0"	No
Column Line Q wall	From shield building wall to 11	From 100'-0" to roof <del>153'-0"</del>	2'-0"	Yes
Column Line 9.2 wall	From I to J and K to L	From 117'-6" to 135'-3"	2'-0"	Yes
Labyrinth Wall between Column Line 7.3 and 9.2 and J to K	J to K	From 117'-6" to 135'-3"	2'-0"	Yes
Auxiliary Area Basemat	From 7.3-11 and I-Q, excluding shield building	From 60'-6" to 66'-6"	6'-0"	No
Floor	From 5 to <del>10'-6"</del> south of 7.3 and I to shield building wall	100'-0"	2'-0"	Yes
<b>Floor</b>	<b>From <del>10'-6"</del> south of 7.3 to 7.3 and I to shield building wall</b>	<b>100'-0"</b>	<b>3'-0"</b>	<b>Yes</b>
Floor	From K to L and shield building wall to column line 10	100'-0"	0'-9"	Yes
Main Control Room Floor	From 9.2 to 11 and I to L	117'-6"	2'-0"	Yes
Floor	Bounded by shield bldg, 7.3, J, 9.2 and L	117'-6"	2'-0"	Yes
Floor	From <del>9.2-shield building</del> to 11 and L to Q	117'-6"	2'-0"	Yes
Floor	From 5 to 7.3 and from I to intersection with shield building wall	135'-3"	0'-9"	Yes

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**Table 3.3-1 (cont.)**  
**Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

Wall or Section Description	Column Lines <sup>(7)</sup>	Floor Elevation or Elevation Range <sup>(7)(8)</sup>	Concrete Thickness <sup>(2)(3)(4)(5)(9)</sup>	Applicable Radiation Shielding Wall (Yes/No)
<b>Annex Building</b>				
Column line 2 wall	From E to H	From 107'-2" to 135'-3"	19 3/4"	Yes
Column line 4 wall	From E to H	From 107'-2" to 162'-6" & 166'-0"	2'-0"	Yes
N-S Shield Wall between E and F	From 2 to 4	From 107'-2" to 135'-3"	1'-0"	Yes
Column line 4.1 wall	From E to H	From 107'-2" to 135'-3"	2'-0"	Yes
<del>E-W Labyrinth Wall between column line 7.1 and 7.8 and G to H</del>	<del>Not Applicable</del>	<del>From 100'-0" to 112'-0"</del>	<del>2'-0"</del>	
N-S Labyrinth Wall between column line 7.8 and 9 and G to H	Not Applicable	From 100'-0" to 112'-0"	2'-0"	Yes
E-W Labyrinth Wall between column line 7.1 and 7.8 and G to H	Not Applicable	From 100'-0" to 112'-0"	2'-0"	Yes
N-S Shield Wall on Column line. F	From 4.1 North	From 100'-0" to 117'-6"	1'-0"	Yes
Column Line 9 wall	From E to connecting wall between G and H	From 107'-2" to 117'-6"	2'-0"	Yes
Column Line E wall	From 9 to 13	From 100'-0" to 135'-3"	2'-0"	Yes
Column Line 13 wall	From E to I.1	From 100'-0" to 135'-3"	2'-0"	Yes
Column Line I.1 wall	From 11.09 to 13	From 100'-0" to 135'-3"	2'-0"	Yes
Corridor Wall between G and H	From 9 to 13	From 100'-0" to 135'-3"	1'-6"	Yes
Column Line 9 wall	From <del>E</del> 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	135'-3"	0'-6"	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"	Yes
Floor	From 9 to 13 and E to I.1	135'-3"	0'-8"	Yes
Containment Filtration Rm A (North Wall)	Between column line E to H	From 135'-3" to 158'-0"	1'-0"	Yes
Containment Filtration Rm A (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"	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"	0'-6"	Yes

**Table 3.3-1 (cont.)  
 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building<sup>(1)</sup>**

<b>Wall or Section Description</b>	<b>Column Lines<sup>(7)</sup></b>	<b>Floor Elevation or Elevation Range<sup>(7)(8)</sup></b>	<b>Concrete Thickness<sup>(2)(3)(4)(5)(9)</sup></b>	<b>Applicable Radiation Shielding Wall (Yes/No)</b>
Containment Filtration Rm B (West wall)	Between column line G to H	From 146'-3" to 158'-0"	1'-0"	Yes
<b>Turbine Building</b>				
Wall adjacent to Column Line I.2	From Col. Line 11.05 to 11.2	From 100'-0" to 161'-0"	2'-0"	No
Wall along Column Line 11.2	From near I.2 to near Col. Line R	From 100'-0" to 161'-0"	2'-0"	No
Wall adjacent to Column Line R	From Col. Line 11.2 to Col. Line 11.05	From 100'-0" to 161'-0"	2'-0"	No
Wall along Column Line 11.05	From near Col. Line R to <b>near</b> Col. Line Q	From 100'-0" to 161'-0"	2'-0"	No
	From Col. Line K.4 to near Col. Line I.2	From 100'-0" to 161'-0"	2'-0"	No