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July 5, 2016

Docket No.: 52-025

ND-16-1059
10 CFR 50.90

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

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3
Revised Preliminary Amendment Request (PAR):
Structural Design of Auxiliary Building Floors (PAR-16-009R2)

Ladies and Gentlemen:

The U.S. Nuclear Regulatory Commission (NRC) issued the Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 combined licenses (COLs) (License Nos. NPF-91 and NPF-92, respectively) to Southern Nuclear Operating Company (SNC) on February 10, 2012.

By letter dated July 1, 2016, SNC submitted a revised request for a license amendment (LAR-16-009R1, SNC correspondence ND-16-1024) to amend the VEGP Units 3 and 4 Updated Final Safety Analysis Report (UFSAR) to revise details related to the structural design of the CA20 module auxiliary building floors at approximate design elevations of 82'-6" and 92'-6".

As discussed during the May 26, 2016, pre-submittal public meeting and in subsequent status discussions, SNC is submitting this revised Preliminary Amendment Request (PAR), PAR-16-009R2, to minimize further construction delays for Unit 3 during the NRC's evaluation of the related License Amendment Request (LAR). The determination of whether the NRC has any objection to SNC proceeding with construction based on the proposed plant licensing basis changes identified in the LAR is requested on or before July 19, 2016. Construction of VEGP Unit 3 seismic Category I module CA20 containing floors subject to the changes proposed in LAR-16-009R1 is currently on hold and delayed determination regarding this PAR will result in continued delay in the construction completion of VEGP Unit 3 structures.

This request supersedes the requests submitted on June 14, 2016 and June 17, 2016, as ND-16-0858 and ND-16-0895, respectively, based on the original LAR-16-009.

A description of the proposed change and the reason for the change are contained in the Enclosure to this letter. This PAR has been developed in accordance with guidance provided in the most recent revision to the Interim Staff Guidance on Changes during Construction Under

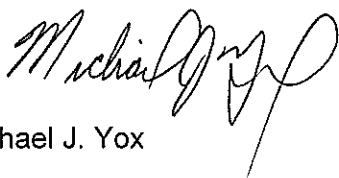
10 CFR Part 52, COL-ISG-25 [ML15058A377], and corresponds accurately and technically with the above-mentioned LAR-16-009R1. Thus, this requested PAR is based on and consistent with the technical scope of the submitted revised LAR. Section 7 of the Enclosure further identifies and details the scope of the "no objection" sought in this PAR.

This letter does not contain any NRC commitments. Should you have any questions, please contact Mr. Jason Redd at (205) 992-6435.

Mr. Michael J. Yox states that: he is the Regulatory Affairs Director - Vogtle 3&4, of Southern Nuclear Operating Company; he is authorized to execute this oath on behalf of Southern Nuclear Operating Company; and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



Michael J. Yox

MJY/ERG/ljs

Sworn to and subscribed before me this 5 day of July

Notary Public: 

Notary Public, Richmond Co., GA
My Commission Expires 8/2/16

My commission expires: _____



Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 – Revised Preliminary Amendment Request Regarding Structural Design of Auxiliary Building Floors (PAR-16-009R2)

cc:

Southern Nuclear Operating Company / Georgia Power Company

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Document Services RTYPE: VND.LI.L00

File AR.01.02.06

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Southern Nuclear Operating Company

ND-16-1059

Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 3

**Revised Preliminary Amendment Request
Regarding
Structural Design of Auxiliary Building Floors
(PAR-16-009R2)**

(This Enclosure consists of 4 pages, including this cover page.)

ND-16-1059

Enclosure

PAR-16-009R2: Structural Design of Auxiliary Building Floors

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC) submitted a license amendment request (LAR) to change the Vogtle Electric Generating Plant (VEGP), Units 3 and 4, licensing basis documents associated with Combined License Nos. NPF-91 and NPF-92, respectively. Accordingly, SNC requests the determination of whether the NRC has any objection to proceeding with construction of VEGP Unit 3 seismic Category I module CA20 within the auxiliary building containing non-finned floors subject to the changes proposed in LAR-16-009R1. The subject floors in module CA20 are currently on hold and delayed determination regarding this PAR will result in continued delay in the construction completion of VEGP Unit 3 structures, as identified in the Preliminary Amendment Request (PAR) provided below to be provided by the date shown below.

PAR Request Number: SNC PAR-16-009R2	Station Name: VEGP	Unit Number(s): <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4	PAR Request Date: July 5, 2016
1. NRC PAR Notification Requested Date (see Block 7 for basis): July 19, 2016			
2. License Amendment Request References (as applicable): <input checked="" type="checkbox"/> LAR submittal date and SNC Correspondence Number: July 1, 2016 / ND-16-1024 <input type="checkbox"/> Expected LAR submittal date: _____			
3. Brief Description of Proposed Change: <p>Changes are proposed (in the associated revised License Amendment Request (LAR-16-009R1)) to the Updated Final Safety Analysis Report (UFSAR) descriptions and figures to address changes in the structural design of concrete-on-steel-plate floors at approximate design elevations of 82'-6" and 92'-6" in the auxiliary building.</p> <p>The changes apply to selected floors at or near the 82'-6" and 92'-6" design elevation in the south end of the auxiliary building. These selected floors include the following room located in the CA20 structural module at design elevation 82'-6": Piping/Valve Room (Room number 12262), and the following rooms located at or near design elevation 92'-6": Pipe Chase (Room number 12269), Cask Loading Pit (Room number 12463), Spent Fuel Storage Pit (Room number 12563) and Waste Monitor Tank Room B (Room number 12365). These floors are part of the CA20 module. The UFSAR text and figures that are proposed to be changed provide information for these floors and are identified as Tier 2* information or as changes in Tier 2 information that are related to involved Tier 2* information. Changes include proposed modifications to define how concrete on steel plate floors without fins can be different from the finned floor critical section in the design details. The variations in the detail design, which include information such as size and spacing of reinforcement in the floors and the spans of the floors, are the result of variations in the geometry of the floors and variations in the loads for which the floors are designed. The floor designs with the design variations satisfy design code requirements in ACI 349 and AISC N690.</p> <p>This activity clarifies the floor to wall connection design for selected concrete-on-steel-plate floors in the auxiliary building as represented in UFSAR Figure 3H.5-9, Sheet 2. These clarifications provide additional details on the use of the code requirements for the connection design. This activity changes the description for the floors in the auxiliary building by specifying requirements for length of the connecting dowel and capacity of the shear studs. The connection length requirements use the ACI 349 requirements for splice length.</p>			

4. Reason for License Amendment Request:

The changes requested by the proposed LAR are primarily revisions to allow variations in the design details of non-finned concrete-on-steel-plate floors in the auxiliary building that are identified as similar to the finned floor (critical section) design. A discussion of the capability of the floors to resist bending loads as described in the above mentioned UFSAR Subsection 3.8.4.4.1 indicates that “[t]his methodology” (which is therein identified for both the non-finned floors and the finned floors) “is described for the control room ceiling in UFSAR Subsection 3H.5.4.” Thus, revisions are needed to allow for variation of the design details of the selected non-finned concrete-on-steel-plate floors in the auxiliary building from the design details discussed and shown for the finned floor.

For example, UFSAR Figure 3H.5-9 shows a finned floor for the ceiling above the main control room and the connection of the floor with the wall on column line 11. Design finalization has resulted in proposed changes for selected concrete-on-steel-plate floors in the auxiliary building that include variation of the size and spacing of the reinforcement from that shown in the figure. The UFSAR text and the figure are proposed to be changed to reflect the variation. The figure shows a floor to wall connection including reinforcement dowels connected to the wall and shear studs attached to the steel plate on the bottom of the floor. The figure shows the required length of the dowel for the critical section but the design criteria for the length is not discussed or identified. For the selected non-finned concrete-on-steel-plate floors in the auxiliary building the length of the dowel extending into the concrete varies from that of the identified similar critical section floor.

As with the finned floors, the bottom steel plates have shear studs welded to the top surface of the plate extending into the concrete and the steel plate provides the bottom layer of reinforcement. The floor is connected to the wall with reinforcing bar dowels located below the elevation of the top of the shear studs. The dowels are connected to standard hooks or headed reinforcement in the walls.

The description of these concrete on steel plate floors is included in the last paragraph of UFSAR Subsection 3.8.4.4.1 and refers to the design methodology for finned floors as described in UFSAR Subsection 3H.5.4. The description of the floors does not specify the design requirements for the connection of the floor to the wall. The connection design of dowels extending into a matrix of shear studs satisfies requirements for development length and splice length in ACI 349. The connection requirements use the ACI 349 requirements for length of the dowels.

Specifying the appropriate code provisions for development length and splice length that apply to the connection design clarifies the application of ACI 349 requirements. The description in UFSAR Subsection 3.8.4.4.1 also includes an inappropriate reference to control room ceiling and stiffeners.

5. Is Exemption Request Required? Yes No

If Yes, Briefly Describe the Reason for the Exemption. Not Applicable

6. Identify Applicable Precedents: No precedence identified.

7. Impact of Change on Installation and Testing Schedules:

SNC’s requested date for approval of this license amendment as identified in the referenced LAR is October 17, 2016. This date is based upon the typical period necessary for reviewing and processing a license amendment request. However, the impacted non-finned CA20 floors at a design elevation of approximately 82’-6” and 92’-6” are ready for construction activities, but are currently placed in a “construction hold” status.

As such, this PAR requests a “no objection” finding related to the revised license amendment request by the date identified in Block 1 above (or sooner if reasonably achievable) to allow for appropriate notifications and release of further CA20 activities currently under the “construction hold” status to allow construction to continue.

This "no objection" finding would be specifically applicable to the following Unit 3 floors at a design elevation of approximately 82'-6" - CA20_34, CA20_35, CA20_36, and CA20_37. These selected floors include the following room located in the CA20 structural module at design elevation 82'-6": Piping/Valve Room (Room number 12262), and the following rooms located at or near design elevation 92'-6": Pipe Chase (Room number 12269), Cask Loading Pit (Room number 12463), Spent Fuel Storage Pit (Room number 12563) and Waste Monitor Tank Room B (Room number 12365).

Specifically, SNC requests a "no objection" finding to begin completion of these identified floor to wall connections at approximately 82'-6" and 82'-6" in Unit 3 auxiliary building structural module CA20 (including the pouring of concrete) in accordance with the design changes proposed in the revised UFSAR description in LAR-16-009R1.

A "no objection" finding for the above activities would release the associated Unit 3 construction holds for these floors related to this construction activity.

8. **Impact of Change on ITAAC:** None

9. **Additional Information:** None