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10 CFR 50.59

U.S. Nuclear Regulatory Commission  
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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Units 3 and 4  
Report of 10 CFR 50.59 Changes, Tests and Experiments  
and 10 CFR 52 Appendix D Departure Report

Ladies and Gentlemen:

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

In accordance with 10 CFR 50.59(d)(2), VEGP Units 3 and 4 is required to submit a report to the NRC containing a brief description of any changes, tests or experiments made pursuant to 10 CFR 50.59(c), including a summary of the evaluation of each. This 10 CFR 50.59 report is for the 6-month period ending December 7, 2012. During that period there were no changes, tests or experiments made pursuant to paragraph (c) of 10 CFR 50.59.

Additionally, in accordance with 10 CFR 52, Appendix D, paragraphs X.B.1 and X.B.3.b, VEGP Units 3 and 4 is required to submit a semi-annual report to the NRC containing a brief description of any plant-specific departures from the DCD, including a summary of the evaluation of each. This 10 CFR 52 Appendix D departure report, provided as Enclosure 1 to this letter, is for the period of June 8, 2012 to December 7, 2012.

If you have any questions regarding this letter, please contact Mr. Wes Sparkman at (205) 992-5061.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

A handwritten signature in dark ink, appearing to read "A. G. Aughtman". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

A. G. Aughtman

AGA/GAB/kms

Enclosure 1: Vogtle Electric Generating Plant (VEGP) Units 3 and 4, Semi-Annual  
Departure Report for the Period of June 8, 2012 to December 7, 2012

cc: Southern Nuclear Operating Company/ Georgia Power Company  
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**Southern Nuclear Operating Company**

**ND-12-2575**

**Enclosure 1**

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

**Semi-Annual Departure Report**

**for the Period of**

**June 8, 2012 to December 7, 2012**

**LDCR / Departure Number:** 2012-010

**Title:** Structural Modules Shear Stud Size and Spacing

**Activity Description:**

Change the shear stud size and spacing in Note 2 of UFSAR (plant-specific DCD) Figure 3.8.3-8, Sheet 1, which presents typical structural wall module details. This information is changed to be consistent with the design basis calculations.

**Summary of Evaluation:**

As noted in UFSAR (plant-specific DCD) Section 3.8.3.1.3, Structural Wall Modules, the information in the Note is designated as Tier 2\*, therefore prior NRC approval was required to make this change. License Amendment Request (LAR-12-001) was submitted to the NRC for approval.

The NRC approved this departure on November 6, 2012 (ML12297A214) and issued License Amendment 003 to Combined Licenses NPF-91 and NPF-92 for VEGP Units 3 and 4, respectively. The NRC Safety Evaluation is documented in ML12297A259.

**LDCR / Departure Number:** 2012-024

**Title:** Auxiliary Building Security Features Update

**Activity Description:**

This activity updates physical security-related design features in the Auxiliary Building to reflect the current building design. The change modifies walls in the Auxiliary Building which serve to protect personnel and equipment from external threats.

**Summary of Evaluation:**

By modifying physical security-related design features, the walls' design functions are unchanged. The implementation of this activity continues to satisfy the requirements of the Security Plan and no security design function is adversely affected. The structural requirements, along with the Seismic Category I classification, will continue to apply to the redesigned walls within the Auxiliary Building. The building design continues to meet the codes and standards within ACI 349-01 and ANSI/AISC N690. There is no impact to any fire area. There is no impact on the Aircraft Impact Assessment. There is no adverse impact on any procedure, method of control, analysis method or test and experiment. The changes do not have an impact on ex-vessel severe accident consequences.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.

**LDCR / Departure Number:** 2012-027

**Title:** Addition of Flow Transmitter to CVS Makeup Pump Discharge Flow Meter

**Activity Description:**

An additional CVS flow transmitter is added to provide for the low-flow range to monitor and control the two CVS Makeup Pumps' discharge flow control valve. The primary purpose for adding the additional low-flow transmitter is to provide the instrumentation channel accuracy of  $\pm 3\%$  for monitoring and control of the Makeup Pumps' discharge flow throughout the expected operational range.

**Summary of Evaluation:**

This change, to add an instrument to provide a design flow measurement accuracy of  $\pm 3\%$  of the operational range, results in a common control system dual range control configuration and was determined to not adversely affect the design functions as described in the UFSAR (plant-specific DCD). The change does not involve a method of evaluation for establishing design bases or in the safety analyses. The change does not involve a test or experiment. The departure does not represent a change to a design feature credited in the ex-vessel severe accident assessment.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.



**LDCR / Departure Number:** 2012-031

Not a deferred change

**Title:** Nuclear Island Basemat Thickness Tolerance

**Activity Description:**

Change the upper tolerance on the Nuclear Island (NI) critical sections basemat thickness as identified in the UFSAR (plant-specific DCD), Subsection 3.8.5 and associated Table 3.8.5-3, Note 2, where this thickness tolerance value is identified. The note is designated as Tier 2\* design information and identifies the NI critical sections basemat thickness upper tolerance as +1 inch. The change is to increase this tolerance to +4 inches.

**Summary of Evaluation:**

Since this information is designated Tier 2\*, prior NRC approval was required to make this change. A License Amendment Request (LAR-12-003) was submitted to the NRC for approval.

The NRC approved this departure on October 25, 2012 (ML12278A411) and issued License Amendment 002 to Combined Licenses NPF-91 and NPF-92 for VEGP Units 3 and 4, respectively. The NRC Safety Evaluation is documented in ML12278A436.

**LCR / Departure Number:** 2012-046

Not a deferred change

**Title:** UFSAR (plant-specific DCD) Figure 3.8.5-3 Discrepancies

**Activity Description:**

The change activity clarifies and revises details of the description of the basemat concrete reinforcement design in the UFSAR (plant-specific DCD) for the nuclear island basemat. The clarifications resolve inconsistencies internal to a plant-specific DCD figure and inconsistencies with the concrete dimensions. The changes to the concrete reinforcement arrangement are consistent with the current design.

**Summary of Evaluation:**

The changes to the reinforcement arrangement in the licensing basis for the nuclear island basemat will not have an adverse impact on the strength of the nuclear island structures or the response of the structures to internal and external loads, including seismic loads. The nuclear island structures, with the change of reinforcement arrangement, remain in compliance with ACI-349. The clarification of the reinforcement design in the licensing basis and revision of reinforcement arrangement for the nuclear island basemat does not result in modification, addition to, or removal of a structure, system, or component (SSC) such that a design function is adversely affected, has no impact on plant operating procedures or a method of control that adversely affects a design function, does not result in an adverse change to a method of evaluation or use of an alternate method of evaluation, does not represent tests or experiments outside the reference bounds of the design basis, and does not alter the assumptions or results of the ex-vessel severe accident assessment.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.

**LDCR / Departure Number:** 2012-047

**Title:** WWS Design Document Discrepancies

Not a deferred change

**Activity Description:**

The UFSAR (plant-specific DCD) Subsection 9.3.5.1.2 is revised to add Auxiliary Building Area 1 in the exception statement for the 1/8 inch per foot minimum slope requirements. The Waste Water System (WWS) drain pipe slope design is for 1/16" per foot in Areas 1 and 2 of the Auxiliary Building at elevation 66'-6". Auxiliary Building Area 1 and 2 at elevation 66'-6" WWS drain size calculations were performed for both areas, and the 1/16 inch per foot slope was determined acceptable.

**Summary of Evaluation:**

The change to add Auxiliary Building Area 1 to the UFSAR (plant-specific DCD) Subsection 9.3.5.1.2 exception statement was evaluated and it was determined that it is not a test or experiment or a modification or addition that affects 1) a design function of an SSC, or 2) an evaluation for demonstrating that intended design functions will be accomplished. There is no adverse affect on the frequency or consequences of accidents or malfunction of an SSC important to safety. There is no adverse impact on any fission product barrier design basis limits, and there is no failure of an SSC leading to a different result than previously analyzed. The slope of these drain lines is not a severe accident design feature.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.

**DCR / Departure Number:** 2012-049

**Title:** Correction to UFSAR Section 13.3 - TSC/OSC Location

Not a deferred change

**Activity Description:**

This departure provides the correct references to the location of the VEGP Units 3 and 4 Technical Support Center and Operations Support Center in UFSAR Sections 1.9.3 and 13.3, consistent with the balance of the UFSAR and the Emergency Plan.

**Summary of Evaluation:**

Correcting the description of the location of the Technical Support Center and the Operations Support Center does not adversely affect a UFSAR design function, the performance or method of control of a UFSAR design function, a method of evaluation described in the UFSAR or constitute an alternate method of evaluation from that which is described in the UFSAR, affect a test or experiment described in the UFSAR nor affect analyses or descriptions described in the UFSAR and does not affect a design feature credited in the ex-vessel severe accident assessment in the UFSAR.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.

**DCR / Departure Number:** 2012-052

**Title:** Nuclear Island Basemat Concrete and Reinforcement Bar

Not a deferred change

**Activity Description:**

The description of the basemat concrete, identified in UFSAR (plant-specific DCD) Subsection 3.8.4.6.1.1 (Tier 2\* information), as having a specified compressive strength of 4000 psi is revised to require a 5000 psi specified compressive strength for the basemat under the nuclear island. In addition, in the Lower-Section detail of UFSAR Figure 3H.5-3 (Tier 2\* information) that represents the basemat below the exterior wall; the 0" dimension is removed.

**Summary of Evaluation:**

This activity affected Tier 2\* information in the UFSAR (plant-specific DCD), therefore a License Amendment Request (LAR-12-007) was submitted to the NRC.

The NRC approved this departure on October 18, 2012 (ML12268A128) and issued License Amendment 001 to Combined Licenses NPF-91 and NPF-92 for VEGP Units 3 and 4, respectively. The NRC Safety Evaluation is documented in ML12268A193.

**LDCR / Departure Number:** 2012-060

**Title:** CA20 Structural Modules

Not a deferred change

**Activity Description:**

This change corrects inconsistencies and discrepancies in UFSAR (plant-specific DCD) Subsection 3.8.4.1.2 to certain details of the structural modules which are used for portions of the Seismic Category I auxiliary building. Subsection 3.8.4.1.2 incorrectly stated that the design of the modules for the auxiliary building is the same as for the containment internal structures. There are also several licensing basis figures that relate to the text and illustrate various design details of the modules. Although the containment internal structures modules and the auxiliary building structural modules are similar, they are not identical. Therefore, UFSAR Subsection 3.8.4.1.2 was revised to clarify the differences between the containment internal structures modules and the auxiliary building modules.

**Summary of Evaluation:**

There is no change to the design requirements or external configuration of the modules in the auxiliary building. The change does not change the dimensions of the structural modules, the amount of steel for reinforcement, or the concrete properties. The structures continue to be in conformance with applicable codes and standards including AISC N690 and ACI 349, and the design basis calculations.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.

**LDCR / Departure Number:** 2012-062

**Title:** Identify SRP Conformance Information in UFSAR as Historical

Not a deferred change

**Activity Description:**

UFSAR, Table 1.6-1 and Subsection 1.9.2 was revised to designate WCAP-15799, "AP1000 Compliance with SRP Acceptance Criteria" as historical information, to reflect that this document which was used to develop the AP1000 DCD is now considered historical information and does not require further updating.

**Summary of Evaluation:**

This activity does not affect any design function described in the UFSAR. The design functions described in the UFSAR, including the plant-specific DCD must continue to be met and marking the Westinghouse WCAP-15799 as historical information does not lessen that requirement or change any technical requirements or commitments regarding the design of SSCs within the scope of the UFSAR.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.

**LDCR / Departure Number:** 2012-064

Not a deferred change

**Title:** Nuclear Island Basemat Concrete Placement

**Activity Description:**

UFSAR, Section 3.8.5.4.2 was revised to provide an option for single placement of the nuclear island basemat concrete.

**Summary of Evaluation:**

By allowing for the best method for constructability for placing concrete in the areas below the sumps and elevator pits in the Auxiliary Building, the Nuclear Island basemat design function is unchanged and not adversely affected. The activity will have no effect on the overall structural integrity, settlement, or construction sequence. The changes do not have an impact on ex-vessel severe accident consequences.

This departure did not involve a change to Tier 1 information, Tier 2\* information or the Technical Specifications. A 10 CFR 50.59/10 CFR 52 Appendix D Section VIII review determined that no prior NRC approval is required.