Southern Nuclear
Operating Company, Inc.
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SOUTHERN COMPANY

APR 0 8 2011

Docket Nos.: 52-025
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ND-11-0632

U.S. Nuclear Regulatory Commission
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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4 Combined License Application
Voluntary Revision to Final Safety Analysis Report Chapter 2

Ladies and Gentlemen:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC) submitted an application for combined licenses (COLs) for proposed Vogtle Electric Generating Plant (VEGP) Units 3 and 4 to the U.S. Nuclear Regulatory Commission (NRC) for two Westinghouse AP1000 reactor plants, in accordance with 10 CFR Part 52. In the enclosure to this letter, SNC is supplementing the COL Application (COLA) Part 2, Final Safety Analysis Report (FSAR), to address a recently identified difference from the AP1000 Design Control Document (DCD) as a departure from the DCD based on design information previously approved in the VEGP Site Early Site Permit (ESP) and Limited Work Authorization (LWA).

If you have any questions regarding this letter, please contact Mr. Wes Sparkman at (205) 992-5061 or Ms. Amy Aughtman at (205) 992-5805.

DO92
NRO

Mr. C. R. Pierce states he is the AP1000 Licensing Manager 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

Charles R Pierce

C. R. Pierce

Sworn to and subscribed before me this 8th *day of* April, *2011*

Notary Public: Dana Marie Williams

My commission expires: 12/1/2014

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

CRP/BJS

Enclosure: VEGP Units 3 and 4 COL Application - Voluntary Revision to FSAR Chapter 2 Involving Mudmat Departure Based on Early Site Permit Design

cc: Southern Nuclear Operating Company
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Southern Nuclear Operating Company

ND-11-0632

Enclosure

VEGP Units 3 and 4 COL Application –

Voluntary Revision to FSAR Chapter 2

Involving

Mudmat Departure Based on Early Site Permit Design

NuStart Qb Tracking No. 4273
VEGP DEP 2.5-1

The Early Site Permit application and initial Limited Work Authorization request was based on information contained in Revision 15 of the AP1000 Design Control Document (DCD). During the DCD Amendment request process, Westinghouse revised the generic mudmat description such that it is no longer consistent with the description provided and as approved in the Vogtle Early Site Permit application. This difference was recently identified and the appropriate departure information (as identified in the COL Application Revisions section below) will be included in an upcoming revision to the COLA. Note that Westinghouse provided related changes to the DCD subsection being revised to the NRC in letter number DCP_NRC_003163, dated April 6, 2011.

This submittal is PLANT-SPECIFIC.

Associated VEGP COL Application Revisions:

1. COLA Part 2, FSAR Chapter 1, Section 1.8, Table 1.8-201, will be revised to add the following additional plant-specific departure listing in its appropriate location:

VEGP DEP 2.5-1	The lower and upper mudmat thickness is as presented in the ESPA SSAR.	2.5.4.1.3

2. COLA Part 2, FSAR Chapter 2, Subsection 2.5.4.1.3, will be added to address a new plant-specific departure with an LMA of VEGP DEP 2.5-1.

2.5.4.1.3 Mudmat

Replace DCD Subsection 2.5.4.1.3 with the following text.

The mudmat provides a working surface prior to initiating the placement of reinforcement for the foundation mat structural concrete. The lower and upper mudmats are as follows:

• Lower mudmat – (6-inch layer) of un-reinforced concrete, with a minimum compressive strength of 2,500 psi. The lower mudmat will be used as the final dental concrete layer on the underlying foundation media.

• Upper mudmat – (6-inch layer) of un-reinforced concrete with a minimum compressive strength of 2,500 psi. This upper mudmat will support the chairs that, in turn, support the reinforcing steel.

The lower and upper mudmats are additionally described in ESPA SSAR Subsection 3.8.5.1.

The waterproofing system is described in DCD Subsection 2.5.4.6.12 and ESPA SSAR Subsection 3.8.5.1.1.

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3. COLA Part 7, Section A. STD and VEGP Departures, will be revised to add the following additional plant-specific departure listing in its appropriate location:

VEGP DEP 2.5-1	Lower and upper mudmat

4. COLA Part 7, Section A.1, Departures That Can Be Implemented Without Prior NRC Approval, will be revised to add the following additional plant-specific departure listing in its appropriate location:

VEGP DEP 2.5-1	Lower and upper mudmat

5. COLA Part 7, Section A.1, Departures That Can Be Implemented Without Prior NRC Approval, will be revised to add the following additional plant-specific departure information in its appropriate location:

Departure Number: VEGP DEP 2.5-1

Affected DCD/FSAR Sections: 2.5.4.1.3

Summary of Departure:

The DCD states that the lower and upper mudmat are a minimum 6 inches thick of un-reinforced concrete. However, the lower and upper mudmat chosen for the Vogtle Electric Generating Plant Units 3 and 4 Early Site Permit Application (ESPA) Site Safety Analysis Report (SSAR) consist of a 6-inch layer of non-reinforced concrete.

Scope/Extent of Departure:

This departure is identified in FSAR Subsection 2.5.4.1.3.

Departure Justification:

The mudmats provide a working surface for the placement of reinforcement for the foundation mat structural concrete for the nuclear island. The lower and upper mudmats for Vogtle Electric Generating Plant, Units 3 and 4, will each be 6-inch layers of non-reinforced concrete which will be nominally 6 inches, but may be less than 6-inches thick given allowable construction tolerances. The remaining aspects of the lower and upper mudmats are consistent with DCD Subsection 2.5.4.6.12, e.g., the waterproof membrane will be placed between the lower and upper mudmats thereby protecting the waterproof membrane from damage during construction of the nuclear island foundation. The lower and upper mudmats are as described in ESPA SSAR Subsection 3.8.5.1.

Departure Evaluation:

This Tier 2 departure is associated with the thickness of the lower and upper mudmats and the elimination of an incorrect cross-reference within the DCD. A lower and upper mudmat that is nominally 6 inches thick but may be less than 6 inches due to construction tolerances is sufficient to meet the DCD functional requirements by providing a working surface prior to initiating the placement of reinforcement for the foundation mat structural concrete while also protecting the waterproof membrane between the mudmats from damage during construction of the nuclear island foundation. The lower and upper mudmats with a nominal thickness of 6 inches will also provide for the adequate transfer of horizontal shear forces from the nuclear island to the Category 1 backfill by using un-

reinforced concrete with a minimum compressive strength of 2,500 psi consistent with the DCD design. Accordingly, it does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;

2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific DCD;

3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;

4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD;

5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;

6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;

7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or

8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This Tier 2 departure does not affect resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD.

Therefore, this departure has no safety significance.

NRC Approval Requirement:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

ASSOCIATED ATTACHMENTS/ENCLOSURE:

None