Southern Nuclear
Operating Company, Inc.
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SOUTHERN COMPANY

MAR 02 2010

Docket Nos.: 52-025
52-026

ND-10-0324

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

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4 Combined License Application
Response to Request for Additional Information Letter No. 045

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. During the NRC's detailed review of this application, the NRC identified a need for additional information, involving the nuclear island foundation settlement analysis, required to complete their review of the COL application's Final Safety Analysis Report (FSAR) Subsection 2.5.4, "Stability of Subsurface Materials and Foundations." By letter dated February 1, 2010, the NRC provided SNC with Request for Additional Information (RAI) Letter No. 045 concerning this nuclear island foundation settlement analysis information need. This RAI letter contains one RAI question numbered 02.05.04-5. The enclosure to this letter provides the SNC response to this RAI.

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

D092
NRO

Mr. B. L. (Pete) Ivey states he is a Vice President 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

Brian L. (Pete) Ivey

Sworn to and subscribed before me this 2nd *day of* March, *2010*

Notary Public: Deborah A. Jaworka

My commission expires: October 24, 2012

BLI/BJS/dmw

Enclosure: Response to NRC RAI Letter No. 045 on the VEGP Units 3 & 4 COL Application Involving the Nuclear Island Settlement Analysis

cc: Southern Nuclear Operating Company
Mr. J. H. Miller, III, President and CEO (w/o enclosure)
Mr. J. T. Gasser, Executive Vice President, Nuclear Operations (w/o enclosure)
Mr. J. A. Miller, Executive Vice President, Nuclear Development (w/o enclosure)
Mr. D. H. Jones, Site Vice President, Vogtle 3 & 4 (w/o enclosure)
Mr. T. E. Tynan, Vice President - Vogtle (w/o enclosure)
Mr. D. M. Lloyd, Vogtle 3 & 4 Project Support Director (w/o enclosure)
Mr. M. K. Smith, Technical Support Director (w/o enclosure)
Mr. C. R. Pierce, AP1000 Licensing Manager
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Mr. J. D. Williams, Vogtle 3 & 4 Site Support Manager
Mr. J. T. Davis, Vogtle 3 & 4 Site Licensing Manager
Mr. W. A. Sparkman, COL Project Engineer
Mr. D. P. Moore, Consulting Engineer
Document Services RTYPE: AR01.1053
File AR.01.02.06

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Southern Nuclear Operating Company

ND-10-0324

Enclosure

Response to NRC RAI Letter No. 045

on the

VEGP Units 3 & 4 COL Application

Involving the

Nuclear Island Settlement Analysis

FSAR Subsection 2.5.4, Stability of Subsurface Materials and Foundations

eRAI Tracking No. 3381

NRC RAI Number 02.05.04-5:

COL FSAR Section 2.5.4 references the ESP SSAR for foundation settlement analysis; SSAR 2.5.4.10.2 "Settlement Analysis" states that the differential settlement between the nuclear island and other structures is less than 1 inch. Since AP1000 DCD Revision 17 Table 2.5-1 requires that the differential settlement between the nuclear island and other structures be less than 1/2 inch, please provide detailed information on whether your COL settlement analysis results meet the standard design requirement. In addition, provide a description of your plans to monitor the differential settlement.

SNC Response:

Table 2.5-1 of the AP1000 DCD Revision 17 was revised by the Westinghouse Electric Company in Revision 2 of their response to RAI-TR85-SEB1-36 in a letter to the NRC dated July 21, 2009. In this table, the limit of differential settlement between the nuclear island and other structures is revised to 3 inches and will be incorporated in a future revision of the DCD. Thus, the differential settlement between the nuclear island and other structures of less than 1 inch, established in ESPA SSAR 2.5.4.10.2, meets the requirements provided in Revision 2 of the aforementioned Westinghouse RAI response.

Please see the Southern Nuclear response dated April 9, 2009 (RAI Letter No. 030) to NRC RAI 02.05.04-4 for a description of the settlement monitoring program for VEGP Units 3 and 4.

This response is PLANT-SPECIFIC for VEGP.

Associated VEGP COL Application Revision:

None