

B. L. (Pete) Ivey
Vice President
Nuclear Development Support

**Southern Nuclear
Operating Company, Inc.**
42 Inverness Center
Post Office Box 1295
Birmingham, Alabama 35201

Tel 205.992.7619
Fax 205.992.5217



APR 28 2010

Docket Nos.: 52-025
52-026

ND-10-0809

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
Revised Response to Request for Additional Information Numbers 08.02-2 and 08.02-7

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 offsite electrical power system, required to complete their review of the COL application's Final Safety Analysis Report (FSAR) Section 8.2, "Offsite Power System." By letter dated December 19, 2008, the NRC provided SNC with Request for Additional Information (RAI) Letter No. 025 concerning this information need. That RAI letter contained nine RAI questions numbered 08.02-1 through -9. By letter dated January 16, 2009, SNC provided a response for these RAIs. However, based on teleconference calls with the NRC and additional follow-up by SNC, the responses to RAI numbers 08.02-2 and 08.02-7 are being revised. The enclosure to this letter provides SNC's revised response to these RAIs.

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

DB92
NRD

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



B. L. (Pete) Ivey

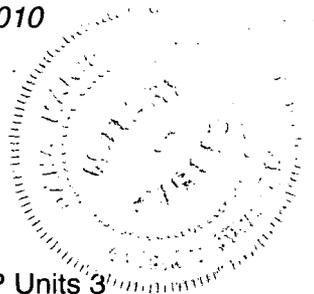
Sworn to and subscribed before me this 28th day of April, 2010

Notary Public: Dana M. Williams

My commission expires: 12/29/2010

BLI/GAB/dmw

Enclosure: Revised Response to NRC RAIs 08.02-2 and 08.02-7 on the VEGP Units 3 and 4 COL Application



cc: Southern Nuclear Operating Company

Mr. J. H. Miller, III, President and CEO (w/o enclosure)
Mr. J. A. Miller, Executive Vice President, Nuclear Development (w/o enclosure)
Mr. J. T. Gasser, Executive Vice President, Nuclear Operations (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
Mr. M. J. Ajluni, Nuclear Licensing Manager
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
Document Services RTYPE: AR01.1053
File AR.01.02.06

Nuclear Regulatory Commission

Mr. L. A. Reyes, Region II Administrator
Mr. F.M. Akstulewicz, Deputy Director Div. of Safety Systems & Risk Assess. (w/o enclosure)
Mr. R. G. Joshi, Lead Project Manager of New Reactors
Ms. T. E. Simms, Project Manager of New Reactors
Mr. B. C. Anderson, Project Manager of New Reactors
Mr. M. M. Comar, Project Manager of New Reactors
Ms. S. Goetz, Project Manager of New Reactors
Mr. J. M. Sebrosky, Project Manager of New Reactors
Mr. D. C. Habib, Project Manager of New Reactors
Ms. D. L. McGovern, Project Manager of New Reactors
Ms. T. L. Spicher, Project Manager of New Reactors
Ms. M. A. Sutton, Environmental Project Manager
Mr. M. D. Notich, Environmental Project Manager
Mr. L. M. Cain, Senior Resident Inspector of VEGP 1 & 2
Mr. J. D. Fuller, Senior Resident Inspector of VEGP 3 & 4

Georgia Power Company

Mr. T. W. Yelverton, Nuclear Development Director
Ms. A. N. Faulk, Nuclear Regulatory Affairs Manager

Oglethorpe Power Corporation

Mr. M. W. Price, Executive Vice President and Chief Operating Officer
Mr. K. T. Haynes, Director of Contracts and Regulatory Oversight

Municipal Electric Authority of Georgia

Mr. S. M. Jackson, Vice President, Power Supply

Dalton Utilities

Mr. D. Cope, President and Chief Executive Officer

Bechtel Power Corporation

Mr. J. S. Prebula, Project Engineer (w/o enclosure)
Mr. R. W. Prunty, Licensing Engineer

Tetra Tech NUS, Inc.

Ms. K. K. Patterson, Project Manager

Shaw Stone & Webster, Inc.

Mr. C. A. Fonseca, Vogtle Project Manager (w/o enclosure)
Mr. J. M. Oddo, Licensing Manager
Mr. D. C. Shutt, Licensing Engineer

Westinghouse Electric Company, LLC

Mr. S. D. Rupprecht, Vice President of Regulatory Affairs & Strategy (w/o enclosure)
Mr. N. C. Boyter, Consortium Project Director Vogtle Units 3 & 4 (w/o enclosure)
Mr. S. A. Bradley, Vogtle Project Licensing Manager
Mr. M. A. Melton, Manager, Regulatory Interfaces
Mr. R. B. Sisk, Manager, AP1000 Licensing and Customer Interface
Mr. D. A. Lindgren, Principal Engineer, AP1000 Licensing and Customer Interface

NuStart Energy

Mr. R. J. Grumbir
Mr. P. S. Hastings
Mr. E. R. Grant
Mr. B. Hirmanpour
Mr. N. Haggerty
Ms. K. N. Slays

Other NuStart Energy Associates

Ms. M. C. Kray, NuStart
Mr. S. P. Frantz, Morgan Lewis
Mr. J. A. Bailey, TVA
Ms. A. L. Sterdis, TVA
Mr. J. P. Berger, EDF
Mr. M. W. Gëttler, FP&L
Mr. P. Hinnenkamp, Entergy
Mr. G. D. Miller, PG&N
Mr. N. T. Simms, Duke Energy
Mr. G. A. Zinke, NuStart & Entergy
Mr. R. H. Kitchen, PGN
Ms. A. M. Monroe, SCE&G
Mr. T. Beville, DOE/PM

Southern Nuclear Operating Company

ND-10-0809

Enclosure

Revised Response to NRC RAIs 08.02-2 and 08.02-7

on the

VEGP Units 3 and 4 COL Application

FSAR Section 8.2, Offsite Power System

eRAI Tracking No.1596

NRC RAI Number 08.02-2:

RG 1.206, C.III.1, Position C.I.8.2.1 states that a COL applicant for passive design should provide a discussion in the FSAR of how the single designated offsite power circuit from the transmission network conforms with the requirements of GDCs 2, 4, 5, 17 and 18 (also see guidance in Standard Review Plan Section 8.2.II). Discuss how the FSAR addresses this consideration or justifies an alternative, as well as how Southern Nuclear Operating Company intends to meet the requirements of 10 CFR 50.65 with respect to maintenance of onsite and offsite power system components.

SNC Response:

There is no portion of the single required offsite circuit required to conform with GDC's 2, 4, 5, and 18. These GDC's are for structures, systems and components important to safety. For the AP1000, the single offsite circuit does not perform a safety-related function as stated in DCD Subsection 8.1.4. The required offsite circuit interface with the safety related batteries is through the class 1E battery chargers. These battery chargers are located within the Nuclear Island which is designed in accordance with GDC's 2 and 4.

Environmental effects are considered in the design of the offsite power circuit. For example, conductors are designed to withstand a particular high temperature (normally 100 degrees C) before violating sag clearances, and transmission lines are designed for high winds, typically 44-100 mph for the VEGP site area, and for appropriate levels of snow and ice. Additionally, transmission lines include overhead ground wires and, in an area with a history of lightning strikes or an area of high ground resistivity, have lightning arrestors installed.

The transmission lines and switchyard are designed so the full output of the plants can be carried out to the network, and the capacity is more than sufficient for any incoming power requirements.

Maintenance and testing of the offsite power circuits is discussed in the response to question 08.02-07.

With regard to GDC 17, Regulatory Guide 1.206, Section C.III.1, Position C.I.8.2.1 states that for passive designs "the applicant should provide information on the single offsite power source with sufficient capacity and capability from the transmission network designed to power the safety related systems and other auxiliary systems under normal, abnormal, and accident conditions. The design of this offsite power source should minimize to the extent practical the likelihood of its failure under normal, abnormal, and accident conditions."

The results of the grid stability analysis demonstrate the offsite source capacity and capability to power plant components during normal, shutdown, startup, and turbine trip conditions. The VEGP grid stability analysis specifically examined two conditions: Normal Running and Turbine Trip. Other conditions (i.e., startup and normal shutdown) are bounded by these analyses. The results of the failure modes and effects analysis demonstrate the reliability of the offsite source which minimizes the likelihood of its failure under normal, abnormal and accident conditions.

FSAR Section 17.6 describes implementation of the requirements of 10 CFR 50.65. As indicated therein, implementation of the NEI 07-02 program description will determine the applicability of the maintenance requirements for the offsite power circuit.

This response is PLANT-SPECIFIC.

Associated VEGP COL Application Revisions:

None.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None.

NRC RAI Number 08.02-7:

Section 8.2.1.4 of the FSAR discusses maintenance, testing, and calibration practices that SCT follows. It states that PD follows its own field test manuals, vendor manuals, industry's maintenance practices, and observes NERC reliability standards. Explain what is meant by 'observes'? Explain whether this statement is intended to indicate that SCT will follow the NERC standards for switchyard maintenance and testing.

SNC Response:

In Subsection 8.2.1.4 of the VEGP Units 3 and 4 FSAR, the phrase "observes NERC reliability standards" is meant to indicate that it is the intention of Southern Company Transmission to follow the NERC standards for switchyard maintenance and testing. The subject paragraph will be revised in a future revision of the COLA as identified in the Application Revisions section below.

This response is PLANT-SPECIFIC.

Associated VEGP COL Application Revisions:

COLA Part 2, FSAR, Chapter 8, Subsection 8.2.1.4, paragraph 3, will be revised from:

For performance of maintenance, testing, calibration and inspection, SCT follows its own field test manuals, vendor manuals and drawings, industry's maintenance practices and observes NERC Reliability Standards, including the following:

- PRC-005-1 Transmission and Generation Protection System Maintenance and Testing.
- PRC-008-0 Under Frequency Load Shedding Equipment Maintenance Program.
- PRC-011-0 Under Voltage Load Shedding System Maintenance and Testing, and Field Test Procedure.

To read:

For performance of maintenance, testing, calibration and inspection, SCT follows its own field test manuals, vendor manuals and drawings, and industry maintenance practices to comply with applicable NERC Reliability Standards.

ND-10-0809
Enclosure
Revised Response to RAIs 08.02-2 and 08.02-7

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None.