B. L. "Pete" Ivey
Vice President
Nuclear Development Support

Southern Nuclear Operating Company, Inc.
42 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35242

Tel 205.992.7619
Fax 205.992.5217

SOUTHERN COMPANY

JUN 18 2010

Docket Nos.: 52-025
52-026

ND-10-1203

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. 059

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 license conditions related to the power ascension test program. By letter dated May 26, 2010, the NRC provided SNC with Request for Additional Information (RAI) letter No. 059 concerning this information need. The enclosure to this letter provides the SNC response to this request.

This letter identifies changes that will be made to a future revision of the VEGP Units 3 and 4 combined license application (COLA).

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.

D092
NRO

Mr. B. L. 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. Ivey

Sworn to and subscribed before me this 18th *day of* June, *2010*

Notary Public: Nancy Louise Henderson

My commission expires: March 23, 2014

BLI/BJS

Enclosure: VEGP Units 3 and 4 COL Application Response to NRC RAI Letter No. 059 Involving the Power Ascension Test Program

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. M. K. Smith, Technical Support Director (w/o enclosure)
Mr. D. M. Lloyd, Vogtle 3 & 4 Project Support Director (w/o enclosure)
Mr. C. R. Pierce, AP1000 Licensing Manager
Mr. M. J. Ajluni, Nuclear Licensing Manager
Mr. T. C. Moorer, Manager, Environmental Affairs, Chemistry and Rad. Services
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 encl.)
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. J. E. Fuller, Senior Vice President, Chief Financial Officer
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. E. R. Grant
Mr. P. S. Hastings
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. W. Maher, 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-10-1203

Enclosure

VEGP Units 3 and 4 COL Application

Response to NRC RAI Letter No. 059

Involving the Power Ascension Test Program

NuStart Qb Tracking No. 4140

NRC eRAI No. 4717

VEGP RAI 14.02-02

Additional License Condition for the Power Ascension Test Phase

Certain milestones within the startup testing phase of the initial test program (i.e., pre critical testing, criticality testing, and low power testing) will need to be controlled through license conditions to ensure that relevant test results are reviewed, evaluated, and approved by the designated licensee management before proceeding with the power ascension test phase. Accordingly, the licensee will provide written notification to the Director of the Office of New Reactors once it determines that:

(a) It has completed all pre critical and criticality testing and confirmed that the test results are within the range of values predicted in the acceptance criteria in the facility's FSAR. Upon submission of this notification, the licensee will conduct low power testing and operate the facility at reactor steady state core power levels, not in excess of [XX] megawatts thermal (5 percent power), in accordance with the conditions specified in the license.

(b) It has completed all low power testing and confirmed that the test results are within the range of values predicted in the acceptance criteria in the facility's FSAR. Upon submission of this notification, the licensee will conduct power ascension testing and operate the facility at reactor steady state core power levels, not in excess of [XX] megawatts thermal (100 percent power), in accordance with the conditions specified in the license.

Response:

The proposed license condition wording is not considered appropriate for the COL.

First, the NRC's proposed license condition could be read to impose hold points for power operation and at 5 percent power. Such hold points are considered unnecessarily burdensome and are inconsistent with NRC regulations. While the Part 50 process used to provide for issuance of a license authorizing operation at 5 percent power and a second license (or license amendment) authorizing operation at 100 percent power (10 CFR 2.340(g) (2007)), such a process has never been contained in Part 52 and is inconsistent with the one-step licensing process in Part 52. Furthermore, in 2007, the NRC revoked the need for a 5 percent license in Part 50 operating license proceedings. 72 FR 49352, 49415-416 (Aug. 28, 2007).

Second, reference to the FSAR acceptance criteria for tests should not be utilized in a license condition. Instead, if the test results are not within the FSAR acceptance criteria, the licensee should be allowed to evaluate the nonconformance to determine whether it is acceptable as-is under the change processes discussed in 10 CFR 52.98.

Nevertheless, Part 10 of the COLA is proposed to be revised as shown below to include a license condition that requires the requested notifications. Some modifications to the wording proposed by the NRC are included. In particular, the revised wording makes it clear that the ability to proceed with the next phase of testing is based on the internal reviews and not on the notification, and it removes any reference to the FSAR. The changes identified in the COL Application Revisions section below will be included in a future COLA revision.

This response is expected to be STANDARD for the S-COLAs.

Associated VEGP COL Application Revisions:

COLA Part 10, Proposed License Conditions, including ITAAC, will be revised to include a new license condition. Line item 9 will be revised from:

9. Not Used

To read:

9. Power-Ascension Test Phase

Certain milestones within the startup testing phase of the initial test program (i.e., pre-critical testing, criticality testing, and low-power (<5% RTP) testing) are controlled through license conditions to ensure that relevant test results are reviewed, evaluated, and approved by the designated licensee management before proceeding with the power ascension test phase. Accordingly, the following license conditions are proposed:

Pre-critical and Criticality Testing

1. Following completion of pre-critical and criticality testing, the licensee shall review and evaluate individual test results. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible organizations, and corrective actions and retests, as required, are performed.
2. The licensee shall provide written notification to the Director of the Office of New Reactors within fourteen (14) calendar days of completion of the pre-critical and criticality testing.

Low-Power (<5% RTP) Testing

1. Following completion of low-power (<5% RTP) testing, the licensee shall review and evaluate individual test results. Test exceptions or results which do not meet acceptance criteria are identified to the affected and responsible organizations, and corrective actions and retests, as required, are performed.
2. The licensee shall provide written notification to the Director of the Office of New Reactors within fourteen (14) calendar days of completion of the low power testing.