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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  
Submittal 8 of the Application

Ladies and Gentlemen:

On March 28, 2008, Southern Nuclear Operating Company (SNC) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) requesting combined licenses (COLs) for two AP1000 advanced passive pressurized water reactors. These new reactors are designated Vogtle Electric Generating Plant (VEGP) Units 3 and 4, and will be located on the existing VEGP site in Burke County, Georgia. The application was submitted in accordance with the requirements contained in 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," and the associated material licenses under 10 CFR Parts 30, 40, and 70. On May 30, 2008, the NRC notified SNC of its acceptance of the VEGP Units 3 and 4 COL Application and commencement of its detailed technical/environmental review of the application. This letter provides updates to the VEGP Units 3 and 4 COL Application required by 10 CFR 50.71(e)(3)(iii) and 10 CFR Part 52, Appendix D, Subsections X.B.1 and X.B.3.b. This update includes the annual update of the docketed Final Safety Analysis Report and the semi-annual update of the Departures Report (COL Application, Part 2 and Part 7, respectively). Additionally, Parts 1, 4, 8, 9, 10, and 11 of the COL Application are also updated. Revisions to this AP1000 Reference COL Application are identified by change bars positioned in the right hand margin.

This application revision incorporates by reference Appendix D to 10 CFR Part 52 and the Westinghouse Electric Company's (Westinghouse's) application for amendment to portions of the AP1000 Design Control Document (DCD) Revision 19 (submitted June 2011).

This application revision continues to incorporate by reference the Vogtle Early Site Permit (ESP) Application, Revision 5, dated December 23, 2008, as approved by the NRC in the Vogtle Early Site Permit and Limited Work Authorization (ESP-004), dated August 26, 2009 (ADAMS Accession Numbers ML092290130 and ML092290157) including the three Amendments identified below:

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- Amendment 1 to Early Site Permit No. ESP-004, dated May 21, 2010 (ADAMS Accession Number ML101400509);
- Amendment 2 to Early Site Permit No. ESP-004, dated June 25, 2010 (ADAMS Accession Number ML101760370);
- Amendment 3 to Early Site Permit No. ESP-004, dated July 9, 2010 (ADAMS Accession Number ML101870522).

ESP action items and Permit Conditions have been addressed in this COL Application.

This submittal also includes changes identified by previous correspondence and voluntary submittals not previously included, through June 22, 2011, for standard and plant-specific material, as well as various other updates such as miscellaneous errata items, and standard and site-specific changes necessary to reflect the incorporation by reference of the AP1000 generic DCD Revision 19.

In accordance with DC/COL-ISG-011, the COL Application has been frozen. Changes to and corrections of errors in the COL Application, including the referenced design control document, that qualify for deferral as provided in ISG-011 are being deferred.

This application is composed of several parts. Each of these is identified below along with indication of any revision contained in this document update.

- Part 1 – General and Financial Information (Revision 4, included)
- Part 2 – Final Safety Analysis Report (FSAR) (Revision 5, included)
- Part 3 – Environmental Report (ER) (Revision 1, previously submitted)
- Part 4 – Technical Specifications (Revision 3, included)
- Part 5 – Emergency Plan (EP) (Revision 4, previously submitted)
- Part 6 – LWA Request (Revision 2, previously submitted)
- Part 7 – Departures, Exemptions and Variances (Revision 5, included)
- Part 8 – Safeguards/Security Plans (Revision 3, material previously submitted on July 30, 2010 (PSP, Revision 2) and March 16, 2011 (SNMPPP, Revision 0))
- Part 9 – Withheld Information (Revision 4, included)
- Part 10 – Proposed License Conditions (Including ITAAC) (Revision 5, included)
- Part 11 – Enclosures (Revision 4, included)

This application revision contains no restricted data or national defense information requiring separation in accordance with 10 CFR 50.33(j).

Part 1 has been revised to reflect changes due to site-specific and standard submittals, and revision of the DCD.

Part 2 has been revised as described above to reflect changes due to site-specific and standard submittals, revision of the DCD, and miscellaneous errata. The FSAR incorporates by reference the AP1000 DCD, Revision 19, which was developed and submitted consistent with approved regulatory processes by Westinghouse.

Part 4 has been revised to reflect changes to the generic Technical Specifications and Bases as provided in the revised DCD.

Part 7 has been revised to reflect the revised DCD, including one new departure related to the mudmat, and miscellaneous errata.

Part 8 has been revised to reflect the submittal of a Special Nuclear Material (SNM) Physical Protection Program Description supporting the request for a Part 70 license.

Part 9 has been revised to reflect changes due to site-specific and standard submittals and miscellaneous errata related to the Mitigative Strategies Description and Plans and to the Cyber Security Plan.

Part 10 has been revised to reflect changes due to site-specific and standard submittals, revision of the DCD, and miscellaneous errata.

Part 11 has been revised to include information related to the Cyber Security Plan, information in support of the Special Nuclear Material license application, and submittal of a New Fuel Shipping Plan.

A document identifying each change, as well as its source or basis, is being provided as an aid to the NRC reviewers and will be submitted by separate letter.

Consistent with common licensing practice, most of the application text is written in the present tense, active voice, including discussions of facilities and programs not yet built or implemented. Exceptions to this approach are the discussions of operating experience and completed studies and evaluations, which are written in the past tense. It should be understood, however, that statements regarding facilities (e.g., structures, systems, and components) and pre-construction, pre-operational, and operational activities (e.g., procedures and programs) typically address activities that have not yet been performed and will not be performed until it is reasonable and appropriate to do so.

A complete set of application documents (identified above), with the exception of Part 8 and a small portion of Part 1, is provided in electronic file format on the enclosed disk. Appropriate pre-submission checks have been successfully performed on the files to ensure compliance with the guidelines provided on the NRC web site and they have been found acceptable for electronic submittal. The disk includes a "packing slip" describing its contents, pursuant to NRC instructions for electronic filing. In addition, by copy of this letter, 30 copies of the COL Application on DVD disks are being provided to the NRC VEGP COL Project Manager.

The SNC licensing contact for this application is W. A. Sparkman at (205) 992-5061 or A. G. Aughtman at (205) 992-5805.

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 developed by Southern Nuclear Operating Company and set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

A handwritten signature in dark ink, appearing to read 'B L Ivey', with a long horizontal line extending from the end of the signature.

B. L. Ivey

Sworn to and subscribed before me this 24<sup>th</sup> day of June, 2011

Notary Public: Nancy Louise Henderson

My commission expires: March 23, 2014

Enclosure: Vogtle Electric Generating Plant Units 3 and 4 COL Application Submittal 8

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. J. R. Johnson, Vice President, Quality and Compliance (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. J. Ajluni, Nuclear Licensing Director (w/o enclosure)  
Mr. C. R. Pierce, AP1000 Licensing Manager (w/o enclosure)  
Mr. T. C. Moorer, Manager, Environmental Affairs, Chemistry and Rad. Services (w/o enclosure)  
Mr. J. D. Williams, Vogtle 3 & 4 Site Support Manager (w/o enclosure)  
Mr. J. T. Davis, Vogtle 3 & 4 Site Licensing Supervisor (w/o enclosure)  
Mr. W. A. Sparkman, COL Project Engineer  
Ms. A. G. Aughtman, Lead AP1000 Licensing Project Engineer (w/o enclosure)  
Document Services RTYPE: GOV0208  
File AR.01.02.06

Nuclear Regulatory Commission

Mr. V. M. McCree, 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 (w/ 30 non-public enclosure DVDs and 12 public enclosure DVDs)  
Ms. T. E. Simms, Project Manager of New Reactors (w/o enclosure)  
Mr. B. C. Anderson, Project Manager of New Reactors (w/o enclosure)  
Mr. M. M. Comar, Project Manager of New Reactors (w/o enclosure)  
Ms. S. Goetz, Project Manager of New Reactors (w/o enclosure)  
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Mr. J. D. Fuller, Senior Resident Inspector of VEGP 3 & 4

Georgia Power Company

Mr. T. W. Yelverton, Nuclear Development Director (w/ public enclosure DVD)  
Ms. A. N. Faulk, Nuclear Regulatory Affairs Manager (w/ public enclosure DVD)

Oglethorpe Power Corporation

Mr. M. W. Price, Executive Vice President and Chief Operating Officer (w/ public enclosure DVD)  
Mr. K. T. Haynes, Director of Contracts and Regulatory Oversight (w/ public enclosure DVD)

Municipal Electric Authority of Georgia

Mr. J. E. Fuller, Senior Vice President, Chief Financial Officer (w/ public enclosure DVD)  
Mr. S. M. Jackson, Vice President, Power Supply (w/ public enclosure DVD)

Dalton Utilities

Mr. D. Cope, President and Chief Executive Officer (w/ public enclosure DVD)

Burke County Chief Executive

Mr. R. Wayne Crockett, Chairman, Burke County Board of Commissioners (w/ public encl. DVD)

Bechtel Power Corporation

Mr. J. S. Prebula, Project Engineer (w/o enclosure)

Mr. R. W. Prunty, Licensing Engineer (w/ public enclosure DVD)

Tetra Tech NUS, Inc.

Ms. K. K. Patterson, Project Manager (w/ public enclosure DVD)

Shaw Stone & Webster, Inc.

Mr. B. Davis, Vogtle Project Manager (w/o enclosure)

Mr. J. M. Oddo, Licensing Manager (w/public enclosure DVD)

Mr. E. C. Wenzinger, Licensing Engineer, Vogtle Units 3 & 4 (w/ public enclosure DVD)

Westinghouse Electric Company, LLC

Mr. S. D. Rupprecht, Vice President, New Plant Product Services (w/o enclosure)

Mr. T. H. Dent, VP, Consortium Project Director Vogtle Units 3 & 4 (w/o enclosure)

Mr. R. F. Ziesing, Director, US Licensing, NPP (w/ public enclosure DVD)

Mr. S. A. Bradley, Vogtle Project Licensing Manager (w/ public enclosure DVD)

Mr. M. A. Melton, Manager, Regulatory Interfaces (w/ public enclosure DVD)

Mr. T. J. Ray, Manager, AP1000 COL Licensing Support (w/ public enclosure DVD)

Mr. D. A. Lindgren, Principal Engineer, AP1000 Licensing and Customer Interface (w/ public enclosure DVD)

NuStart Energy

Mr. R. J. Grumbir (w/ public enclosure DVD)

Mr. E. R. Grant (w/ public enclosure DVD)

Mr. P. S. Hastings (w/ public enclosure DVD)

Mr. B. Hirmanpour (w/ public enclosure DVD)

Mr. N. Haggerty (w/ public enclosure DVD)

Ms. K. N. Slays (w/ public enclosure DVD)

Other NuStart Energy Associates

Ms. M. C. Kray, NuStart (w/ public enclosure DVD)

Mr. S. P. Frantz, Morgan Lewis (w/ public enclosure DVD)

Mr. J. A. Bailey, TVA (w/ public enclosure DVD)

Ms. A. L. Sterdis, TVA (w/ public enclosure DVD)

Mr. M. Vidard, EDF (w/ public enclosure DVD)

Mr. W. Maher, FP&L (w/ public enclosure DVD)

Mr. J. Douet, Entergy (w/ public enclosure DVD)

Mr. N. T. Simms, Duke Energy (w/ public enclosure DVD)

Mr. G. A. Zinke, NuStart & Entergy (w/ public enclosure DVD)

Mr. R. H. Kitchen, PGN (w/ public enclosure DVD)

Ms. A. M. Monroe, SCE&G (w/ public enclosure DVD)

Mr. T. Miller, DOE/PM (w/ public enclosure DVD)

**Southern Nuclear Operating Company**

**ND-11-1264**

**Enclosure**

**Vogtle Electric Generating Plant Units 3 and 4**

**COL Application Submittal 8**

Enclosure 1  
ND-11-1264  
Page 2 of 2

**Contact**

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**Document Components:**

One DVD is included in this submission enclosure and it is labeled "Vogtle Electric Generating Plant, Units 3 and 4 COL Application, Submittal 8, ND-11-1264 Enclosure." The contents of the DVD are specified on the packing slip for the DVD.

**NOTE: Part 9 of the COL Application contains Sensitive Unclassified Non-Safeguards Information (SUNSI) — Withhold Under 10 CFR 2.390(d).**