

**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



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Docket Nos.: 52-025  
52-026

ND-10-0993

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. 056

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 inservice testing program for squib valves, required to complete their review of the COL application's Final Safety Analysis Report (FSAR) Section 3.9.6, "Functional Design Qualification and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints." By letter dated April 29, 2010, the NRC provided SNC with Request for Additional Information (RAI) Letter No. 056 concerning this information need. That RAI letter contained one RAI question numbered 03.09.06-01. The enclosure to this letter provides SNC's response to this RAI.

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.

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

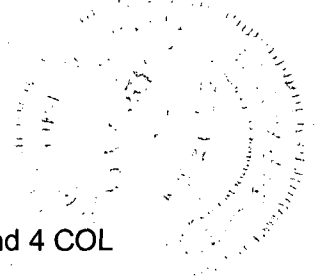
Sworn to and subscribed before me this 27<sup>th</sup> day of May, 2010

Notary Public: Nancy Louise Henderson

My commission expires: March 23, 2014

BLI/BJJS

Enclosure: Response to NRC RAI Letter No. 056 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. 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 – Env. 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  
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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. M. W. Gettler, 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-10-0993**

**Enclosure**

**Response to NRC RAI Letter No. 056**

**on the**

**VEGP Units 3 and 4 COL Application**

## **FSAR Section 3.9.6, Inservice Testing of Pumps and Valves**

**eRAI Tracking No. 4645**

**NRC RAI Number 03.09.06-01**

General Design Criterion 1, "Quality Standards and Records," in 10 CFR Part 50, Appendix A, requires that codes and standards to be applied shall be evaluated to determine their applicability, adequacy, and sufficiency; and shall be supplemented or modified as necessary to assure a-quality product in keeping with the required safety function. Section C.IV.4 in Regulatory Guide 1.206 discusses the requirement in 10 CFR 52.79(a) for descriptions of operational programs that need to be included in the FSAR for a COL application to allow a reasonable assurance finding of acceptability. In particular, a COL applicant should fully describe the inservice testing (IST) program as defined in SECY-05-197 (accepted in an SRM dated February 22, 2006). Subsection ISTC-5260, "Explosively Actuated Valves," in the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) specifies that at least 20% of the charges in explosively actuated valves shall be fired and replaced at least once every 2 years.

In light of the updated design and safety significance of squib valves in new reactors, the need for improved surveillance activities for squib valves is being considered by the nuclear industry, ASME, and U.S. and international nuclear regulators. The NRC staff requests that Southern Nuclear describe in the Vogtle FSAR its plans for establishing appropriate surveillance activities for squib valves in support of the Vogtle COL application. For example, the Vogtle FSAR should indicate that the IST program for squib valves at Vogtle Units 3 & 4 will be developed to incorporate lessons learned from the design and qualification process for these valves such that surveillance activities provide reasonable assurance of the operational readiness of squib valves to perform their safety functions.

### **SNC Response:**

This RAI requested annotating the FSAR description to include additional details for establishing the IST program for squib valves to address lessons learned and improved surveillance activities being considered by nuclear industry. Testing of explosively actuated valves is described in subsection 3.9.6.2.2 "Valve testing" of DCD. This section of the DCD is incorporated by reference into the FSAR. Therefore, FSAR section 3.9.6.2.2 will be supplemented in a future submittal of the COLA to include consideration of lessons learned and industry development as shown in the Associated VEGP COL Application Revisions section that follows.

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

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**Associated VEGP COL Application Revisions:**

COLA Part 2, FSAR Chapter 3, Subsection 3.9.6.2.2, will be revised to include the following new paragraph with a left margin annotation (LMA) of STD COL 3.9-4:

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Add the following new paragraph under the heading "Other Valve Inservice Tests" following the Explosively Actuated Valves paragraph in DCD Subsection 3.9.6.2.2:

Industry and regulatory guidance is considered in development of the IST program for squib valves. In addition, the IST program for squib valves incorporate lessons learned from the design and qualification process for these valves such that surveillance activities provide reasonable assurance of the operational readiness of squib valves to perform their safety functions.

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**ASSOCIATED ATTACHMENTS/ENCLOSURES:**

None