

Southern Nuclear  
Operating Company, Inc.  
42 Inverness Center Parkway  
Birmingham, Alabama 35242



MAR 15 2010

Docket Nos.: 52-025  
52-026

ND-10-0559

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  
Supplemental Response 2 to Request for Additional Information Letter No. 005

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 offsite communication information required to complete their review of the COL application's Final Safety Analysis Report (FSAR) Subsection 9.5.2, "Communication System." By letter dated October 6, 2008, the NRC provided SNC with Request for Additional Information (RAI) Letter No. 005 concerning this offsite communication information need. The RAI letter contained four RAI questions numbered 09.05.02-1 through -4. By letter dated November 4, 2008, SNC provided a response to these RAIs. Subsequently, SNC supplemented its response to the RAIs in a letter dated December 23, 2008. Based on additional NRC feedback provided in a phone call on February 22, 2010, SNC is providing a second supplement to its response to RAI 09.05.02-3. The enclosure to this letter provides SNC's supplemental response to this RAI.

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

D092  
NRD

Mr. C. R Pierce states he is the Nuclear Development AP1000 Licensing Manager for 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

*Charles R Pierce*

Charles R. Pierce

Sworn to and subscribed before me this 15<sup>th</sup> day of March, 2010

Notary Public: *Deborah A. Jaworska*

My commission expires: October 24, 2012

CRP/BJS/lmp

Enclosure: Supplemental Response 2 to NRC RAI Letter No. 005 on the VEGP Units 3 & 4 COL Application Involving Offsite Communication

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. B. L. Ivey, Vice President, Nuclear Development Support (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. 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  
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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

Georgia Power Company

Mr. T. W. Yelverton, Nuclear Development Director

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. K. B. Allison, 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. 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. P. S. Hastings, NuStart & Duke Energy

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-10-0559**

**Enclosure**

**Supplemental Response 2 to NRC RAI Letter No. 005**

**on the VEGP Units 3 & 4 COL Application**

**Involving Offsite Communication**

## **FSAR Subsection 9.5.2, Communication System**

### **eRAI Tracking No. 1211**

#### **NRC RAI Number 09.05.02-3:**

Demonstrate that a sufficient backup or alternate power sources have been provided for the offsite communications systems to meet the COL information item 9.5-10 (COL action item 9.5.2-1). Specifically, describe the design of the crisis management radio system available for emergency radio communications.

COL information item 9.5-10 (COL action item 9.5.2-1), which is contained in the DC-FSAR in Tier 2, Table 1.8-2, states: "the emergency offsite communication system, including the crisis management radio system, will be addressed by the Combined License applicant." The applicant has submitted VEGP COL item 9.5-10 in the COL FSAR to satisfy this information item. The applicant has stated in the Vogtle FSAR Section 9.5.2.5.2 that the Early Site Permit Application (ESPA) Emergency Plan Section F addresses VEGP COL item 9.5-10. Section F of the Emergency Plan states that communications among the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operations Facility (EOF) will be completed using dedicated telephone circuits, normal plant telephones, and radio, using the plant network. The radio system will also be used for communications with the radiological monitoring teams. Provide additional details regarding the design of the radio system used for onsite communications. In addition, 10 CFR 73.55 (f)(3) requires the capability of continuous communication, radio or microwave transmitted two-way voice communication, either directly or through an intermediary, be established, in addition to conventional telephone service, between local law enforcement authorities and the facility and be terminated in each continuously manned alarm station. Demonstrate that the radio system described in Section F of the Emergency Plan can integrate with offsite communications systems to local and state authorities.

#### **SNC Response:**

Communications among the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF) and offsite agencies (state and local authorities) are accomplished using a combination of dedicated telephone circuits, normal plant telephones, and radios. The radio system available for emergency communications will have the following characteristics:

- The radio system consists of several base stations and the associated cabling and antennas strategically located to afford the best possible coverage and accessibility with respect to maintenance, security and uninterrupted power.
- For control of the base station, remotes are used in selected facilities. Some remotes are capable of channel selection as well as volume control.
- Trunked Radios utilizing iDEN® (Integrated Digital Enhanced Network) and TDMA (Time Division Multiple Access). TDMA is a channel access method for shared medium networks. It allows several users to share the same frequency channel by dividing the signal into different time slots. The users transmit in rapid succession, one after the other, each using his own time slot. This allows multiple stations to share the same transmission medium (e.g. radio frequency channel) while using only a part of its channel capacity. TDMA is used in the digital 2G cellular systems such as Global

System for Mobile Communications (GSM), IS-136, Personal Digital Cellular (PDC) and iDEN, and in the Digital Enhanced Cordless Telecommunications (DECT) standard for portable phones. It is also used extensively in satellite systems, and combat-net radio systems.

- Hand-held radios form another part of the radio system. These are small portable battery operated radios capable of one or several channels.
- Mobile radios are mounted in vehicles and use a 12V DC power source supplied by the vehicle's battery. Mobile radios are capable of one or several channels and have an external antenna mounted on the vehicle. Radio controls such as volume, channel selection and microphone are provided.

Multiple radios are contained within the emergency communications radio system. These radios, collectively, constitute the crisis management radio system and are described below:

The In-plant Radio will be used for communications with in-plant Radiological Emergency Teams (RETs). The radio will be pre-programmed with channels for individual departments and/or functional areas of the emergency response. This radio is accessible from the Control Room, TSC (remote unit) and EOF Voice Over Internet Protocol (VOIP), Central Alarm Station (CAS) and Secondary Alarm Station (SAS).

The Field Monitoring Team Radio is used as a back-up communication device for communications with Radiological Field Monitoring Teams. The primary radio for this function is the Southern LINC radio system. Field Monitoring Teams will use mobile radios available in vehicles or hand-held units as needed. This radio is accessible from the Control Room, TSC (remote unit) and EOF.

The Security Team Radio is used for communications between in-plant Security personnel and operations personnel as appropriate. Tone remotes are located in the Control Room, the Central Alarm Station and the Secondary Alarm Station. Handheld radios are used throughout the plant site.

The Burke County Emergency Management Radio is used as a back-up to the ENN. This radio is accessible from the TSC (remote unit) and EOF (VOIP). Communications via this radio are direct between SNC and the Burke County Emergency Operations Center.

The South Carolina Emergency Management Division (SCEMD) Radio is used as a back-up to the ENN. This radio is accessible from the TSC (remote unit). Communications via this radio are direct between SNC and the SCEMD Emergency Operations Center (SEOC).

This response is PLANT-SPECIFIC for VEGP.

#### **Associated VEGP COL Application Revision:**

1. Add the following supplement to COLA Part 5 after the supplement related to Subsection D.1:

Add the following paragraphs between the second and third sentences of the first paragraph of Subsection F.5, Communications among VEGP Emergency Response Facilities:

"The Emergency Communications System (ECS) will have the following characteristics:

- The radio system will consist of base stations and the associated cabling and antennas and will be provided with uninterrupted power.
- For control of the base station, remotes are used in selected facilities.
- Trunked Radios capable of allowing multiple stations to share the same transmission medium (e.g. radio frequency channel) while using only a part of its channel capacity.
- The system includes hand-held radios and mobile radios.

A description of ECS radios is given below:

- The In-plant Radio will be used for communications with in-plant Radiological Emergency Teams (RETs). This radio is accessible from the Control Room, TSC (remote unit) and EOF Voice Over Internet Protocol (VOIP), Central Alarm Station (CAS) and Secondary Alarm Station (SAS).
- The Field Monitoring Team Radio is used as a back-up communication device for communications with Radiological Field Monitoring Teams. The primary radio for this function is the Southern LINC radio system. This radio is accessible from the Control Room, TSC (remote unit) and EOF.
- The Security Team Radio is used for communications between in-plant Security personnel and operations personnel as appropriate. Tone remotes are located in the Control Room, the Central Alarm Station and the Secondary Alarm Station.
- The Burke County Emergency Management Radio is used as a back-up to the ENN. This radio is accessible from the TSC (remote unit) and EOF (VOIP). Communications via this radio are direct between SNC and the Burke County Emergency Operations Center.
- The South Carolina Emergency Management Division (SCEMD) Radio is used as a back-up to the ENN. This radio is accessible from the TSC (remote unit). Communications via this radio are direct between SNC and the SCEMD Emergency Operations Center (SEOC)."