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SOUTHERN COMPANY

DEC 23 2008

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ND-08-1927

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 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 16, 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. SNC is supplementing its response to these RAIs based on NRC feedback provided in a phone call on November 24, 2008. The enclosure to this letter provides SNC's supplemental response to these RAIs.

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

D092
NRO

Mr. J. A. (Buzz) Miller states he is a Senior 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

Joseph A. (Buzz) Miller

Sworn to and subscribed before me this 23rd *day of* December, *2008*

Notary Public: Charlotte A. Graham

My commission expires: 6/9/12

JAM/BJS/lac

Enclosure: Supplemental Response 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)
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Mr. T. E. Tynan, Vice President - Vogtle (w/o enclosure)
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Mr. C. R. Pierce, Vogtle Development Licensing Manager
Mr. M. J. Ajluni, Nuclear Licensing Manager
Mr. W. A. Sparkman, COL Project Engineer
Document Services RTYPE: AR01.1053
File AR.01.02.06

Nuclear Regulatory Commission
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Mr. M. D. Notich, Environmental Project Manager
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Mr. O. C. Harper, IV, Vice President, Resource Planning and Nuclear Development (w/o enclosure)

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Mr. M. W. Price, Chief Operating Officer (w/o enclosure)

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Southern Nuclear Operating Company

ND-08-1927

Enclosure

Supplemental Response 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 09.05.02-1:

Demonstrate how Nuclear Regulatory Commission (NRC) Bulletin 80-15 has been addressed in the FSAR as required by COL information item 9.5-9 (COL action item 9.5.2-3). Specifically, describe what backup power sources are available for the Emergency Notification System.

COL information item 9.5-9, which is contained in the DC-FSAR in Tier 2, Table 1.8-2 states: "Combined License applicants referencing the AP1000 certified design will address interfaces to required offsite locations; this will include addressing the recommendations of BL-80-15 (Reference 21) regarding loss of the emergency notification system (ENS) due to a loss of offsite power." The applicant has submitted VEGP COL item 9.5-9 in Section 9.5.2.5.1 of the Vogtle COL FSAR to satisfy this COL Information Item. The Vogtle FSAR Section 9.5.2.5.1 states that the Early Site Permit Application (ESPA) Emergency Plan Section F addresses VEGP COL item 9.5-9. Section F of the Emergency Plan states that the Emergency Notification System (ENS) is the primary means for communication between the site and the NRC. Demonstrate how NRC Bulletin 80-15 has been addressed. Specifically, describe the backup power sources available for the ENS in case of loss of offsite power.

SNC Response:

NRC Bulletin 80-15 requires ENS communication systems to have a back-up power source, independent of the normal station sources if the ENS communication system is powered by a "station package."

A "station package" means there is a switching station at the site and power for the switch comes from the station power sources. In June of 2000, Regulatory Information Summary (RIS) 00-011 informed the industry that the NRC would be transitioning to a new system for the Emergency Telecommunications System (ETS) which would include the ENS function. The replacement system (Federal Telecommunications System [FTS] 2001) service does not use local switches. Power for ENS site equipment is supplied by the offsite system and does not rely on station power.

Use of the FTS 2001 system, or the latest approved communication portals for emergency communications with the NRC, is planned for Vogtle Units 3 and 4. Power for the ENS and other FTS functions does not come from the site. Based on the power supply for the FTS being offsite, the requirements of Bulletin 80-15 are met. Back-up power for the ENS is provided by the FTS 2001 supplier (i.e., Federal Telephone System). On-site systems supporting the FTS system are provided with multiple power sources including diesel and battery backup. ENS phones are located in the Control Room, TSC and EOF. Dedicated telephone communication links provided by the FTS, and their locations, include:

- NRC Emergency Notification System (ENS)
  - Control Room
  - TSC
  - EOF
- NRC Health Physics Network (HPN)
  - TSC
  - EOF

- Reactor Safety Counterpart Link (RSCL)
  - TSC
  - EOF
- Protective Measures Counterpart link (PMCL)
  - TSC
  - EOF
- Management Counterpart Link (MCL)
  - TSC
  - EOF
- Operations Center LAN (OCL)
  - TSC
  - EOF

Associated VEGP COL Application Revision:

See Attachment to this enclosure (page 7) for the associated COL application revision. Paragraphs one and two, including the bulleted list, address the information requested for VEGP COL 9.5-9.

NRC RAI Number 09.05.02-2:

Demonstrate that a sufficient backup or alternate power sources have been provided for the offsite communications systems to meet the requirements of Appendix E to 10 CFR Part 50, Part IV.E(9).

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 the Emergency Notification Network is the primary means for communication between the site and the local authorities, including the State of South Carolina and Aiken, Barnwell, and Allendale Counties, and the State of Georgia and Burke County. Appendix E to 10 CFR Part 50, Part IV.E(9) requires that the sites' emergency facilities and equipment provide at least one onsite and one offsite communications system; each system shall have a backup power source. The staff has reviewed the ESPA Emergency Plan and has been unable to identify the backup power source available for the ENN. Demonstrate that a sufficient backup or alternate power sources have been provided for ENN to meet the requirements of Appendix E to 10 CFR Part 50, Part IV.E(9).

SNC Response:

Detailed design features for the communication power supply are not yet completely determined. However, design specifications include provisions for multiple power sources for the communication system. The design provides for back-up power to be provided by a combination of diesel generator and/or battery supplied power. Communication system power supplies will be identified in Emergency Implementing Procedures.

Associated VEGP COL Application Revision:

See Attachment to this enclosure (page 7) for the associated COL application revision. Paragraph three addresses the information requested for VEGP COL 9.5-10.

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 (VOIP).

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 through-out 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 radio is accessible from the TSC (remote unit).

NRC RAI Number 09.05.02-4:

Clarify how the switchover between the ENN and the backup commercial telephone lines is completed.

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 the Emergency Notification Network (ENN) is the primary means for communication between the Site and the local authorities, including the State of South Carolina and Aiken, Barnwell, and Allendale Counties, and the State of Georgia and Burke County. The ENN system is available on a twenty-four seven basis. Commercial telephones provide backup for the dedicated telephone circuits. Clarify how the switchover between the dedicated telephone circuits and the backup commercial telephone lines is completed when the dedicated telephone circuits become unavailable.

SNC Response:

The Emergency Notification Network (ENN) is the primary means for communication between the Site and the local authorities, including the State of South Carolina and Aiken, Barnwell, and Allendale Counties, and the State of Georgia and Burke County. The ENN system is available on a twenty-four seven basis. Commercial telephones provide backup for the dedicated telephone circuits.

In the event of failure of either the dedicated telephone circuits or the ENN equipment (transmitting station and/or single/multiple receiving stations), commercial telephone lines are used. To transfer to the back-up system, the communicator manually initiates communications using commercial telephone lines for the affected station(s) as directed by Emergency Implementing Procedures.

Associated VEGP COL Application Revision:

See Attachment to this enclosure (next page) for the associated COL application revision. Paragraphs four and five address the information requested for VEGP COL 9.5-10.

Revise COLA Part 2, FSAR Chapter 9, to add the following new Subsection 9.5.2.2.5 after DCD Subsection 9.5.2.2.4.

9.5.2.2.5 Offsite Interfaces

VEGP COL 9.5-9

The Emergency Notification System (ENS) is part of the Federal Telecommunication System (FTS). The FTS does not rely on station switches at VEGP, and therefore the requirements of Bulletin 80-15 are satisfied.

Back-up power for the ENS is provided by the FTS 2001 supplier. On-site systems supporting the FTS system are provided with multiple power sources including diesel and battery backup. ENS phones are located in the Control Room, TSC and EOF. Dedicated telephone communication links provided by the FTS, and their locations, include:

- NRC Emergency Notification System (ENS)
  - Control Room
  - TSC
  - EOF
- NRC Health Physics Network (HPN)
  - TSC
  - EOF
- Reactor Safety Counterpart Link (RSCL)
  - TSC
  - EOF
- Protective Measures Counterpart link (PMCL)
  - TSC
  - EOF
- Management Counterpart Link (MCL)
  - TSC
  - EOF
- Operations Center LAN (OCL)
  - TSC
  - EOF

VEGP COL 9.5-10

Design specifications include provisions for multiple power sources for the communication system. The design provides for back-up power to be provided by a combination of diesel generator and/or battery supplied power. Communication system power supplies will be identified in Emergency Implementing Procedures.

The Emergency Notification Network (ENN) is the primary means for communication between the Site and the local authorities, including the State of South Carolina and Aiken, Barnwell, and Allendale Counties, and the State of Georgia and Burke County. The ENN system is available on a twenty-four seven basis. Commercial telephones provide backup for the dedicated telephone circuits.

In the event of failure of either the dedicated telephone circuits or the ENN equipment (transmitting station and/or single/multiple receiving stations), commercial telephone lines are used. To transfer to the back-up system, the communicator manually initiates communications using commercial telephone lines for the affected station(s) as directed by Emergency Implementing Procedures.

Revise COLA Part 2, FSAR Chapter 9, Subsection 9.5.2.5.1 to read:

VEGP COL 9.5-9 This COL Item is addressed in ESPA Emergency Plan Section F and FSAR Subsection 9.5.2.2.5.

Revise COLA Part 2, FSAR Chapter 9, Subsection 9.5.2.5.2 to read:

VEGP COL 9.5-10 This COL Item is addressed in ESPA Emergency Plan Section F and FSAR Subsection 9.5.2.2.5.