



June 24, 2009  
NND-09-0117

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

ATTN: Document Control Desk

Subject: Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3 Combined License Application (COLA) - Docket Numbers 52-027 and 52-028 Supplemental Response No. 1 to NRC Request for Additional Information (RAI) Letter No. 023

References: 1) Letter from Tanya Simms (NRC) to Alfred M. Paglia (SCE&G), Request for Additional Information Letter No. 023 Related to SRP Section 9.5.2 for the Virgil C. Summer Nuclear Station Units 2 and 3 Combined License Application, dated January 22, 2009.

2) Letter from Ronald B. Clary (SCE&G) to Document Control Desk, Response to NRC Request for Additional Information (RAI) Letter No. 023, dated February 23, 2009.

The enclosure to this letter provides the South Carolina Electric & Gas Company (SCE&G) supplemental response to RAI items included in the above referenced NRC letter. This enclosure includes responses to NRC RAI Numbers 09.05.02-2 through 09.05.02-6. The enclosure also identifies any associated changes that will be incorporated in a future revision of the VCSNS Units 2 and 3 COLA.

Should you have any questions, please contact Mr. Al Paglia by telephone at (803) 345-4191, or by email at [apaglia@scana.com](mailto:apaglia@scana.com).

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 24<sup>th</sup> day of JUNE, 2009.

Sincerely,

Stephen A. Byrne  
Senior Vice President  
Generation

DO03  
NRC

AMM/SAB/am

Enclosure

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**NRC RAI Letter No. 023 Dated January 22, 2009**

**SRP Section: 09.05.02 - Communications Systems**

Question from Instrumentation, Controls and Electrical Engineering 1 (ICE1)

**NRC RAI Number: 09.05.02-2**

Identify the primary and backup power sources, and their transfer capability, for the offsite communication system and the Emergency Notification System (ENS). Include this information in the V.C. Summer FSAR.

COL Information Item 9.5-9, which is documented in AP1000 DC-FSAR 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.”

V.C. Summer COL FSAR Section 9.5.2.5.1 states that COL Information Item 9.5-9 is addressed in the Emergency Plan, but does not provide the exact subsection. However, Section F of the V.C. Summer COL Emergency Plan states that there is a backup power source for the offsite communication systems and for ENS.

1. Identify the primary and backup power sources for the offsite communication systems and for ENS.
2. Describe the transfer to the backup power sources in the case of a Loss of Offsite Power event.

**VCSNS RESPONSE:**

Detailed design of the primary and backup communication power supplies has not been completed at this time. However, design specifications address the requirement for multiple power sources for the communication systems. These specifications provide for a combination of inverters, batteries and/or diesel generator supplied power. This diversity provides for communication system power supplies that ensure off-site communications can be maintained in the event of a loss of offsite power.

This response is PLANT SPECIFIC.

**ASSOCIATED VCSNS COLA REVISIONS:**

No COLA changes have been identified at this time as a result of this response.

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**ASSOCIATED ATTACHMENTS:**

None

**NRC RAI Letter No. 023 Dated January 22, 2009**

**SRP Section: 09.05.02 - Communications Systems**

Question from Instrumentation, Controls and Electrical Engineering 1 (ICE1)

**NRC RAI Number: 09.05.02-3**

Describe the backup communication method provided for the offsite communication systems to meet COL Information Item 9.5-10. Specifically, describe in greater detail the design of the 800 MHz Radio system and the other backup communications methods for offsite communications.

COL Information Item 9.5-10 states:

"The emergency offsite communication system, including the crisis management radio system, will be addressed by the Combined License applicant."

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 800 MHz Radio system, as well as the other backup communications options, are capable of two-way continuous transmission. In addition, please specify which systems act as a backup to all the primary emergency communication systems and include this information in the V.C. Summer FSAR.

**VCSNS RESPONSE:**

The 800 MHz radio system capabilities have been demonstrated by successful application at VCSNS Unit 1 to be a reliable communication tool. Appropriate design of the system utilizing both base stations and remote units in conjunction with associated cabling, repeaters, and antennas provides for optimum coverage for two-way continuous transmission. As necessary, certain direct channels can be selected to allow handset to handset communication.

In addition, there are multiple other wireless communication devices available to the emergency response personnel such as satellite phones and cellular devices. These communication products are readily available and commonly used so operation of the equipment is readily understood.

Details for the use of these communication options are contained in implementing procedures for the Emergency Plan.

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This response is PLANT SPECIFIC.

**ASSOCIATED VCSNS COLA REVISIONS:**

No COLA changes have been identified as a result of this response.

**ASSOCIATED ATTACHMENTS:**

None

**NRC RAI Letter No. 023 Dated January 22, 2009**

**SRP Section: 09.05.02 - Communications Systems**

Question from Instrumentation, Controls and Electrical Engineering 1 (ICE1)

**NRC RAI Number: 09.05.02-4**

Describe the backup methods and the primary and backup power sources for the Emergency Response Data System (ERDS) system. Identify the backup method in the FSAR.

COL Information Item 9.5-9, which is documented in AP1000 DC-FSAR 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."

V.C. Summer COL Emergency Plan Section F(1)(5) states, "The ERO has backup methods available to provide required information to the NRC in the event that ERDS is inoperable during the the declared emergency." There is no specific detail on the backup methods and the primary and backup power sources for ERDS.

**VCSNS RESPONSE:**

While the detailed design of the primary and backup communication power supplies has not been completed at this time, design specifications address the requirement for multiple power sources for the communication systems. These specifications provide for a combination of inverters, batteries and/or diesel generator supplied power.

Implementing procedures will address the specific alternatives for providing the required information to the NRC in the event ERDS is unavailable. One alternative is to utilize an individual communicator and a commercial telephone line to speak directly with an NRC contact. However, specific protocol will be contained in the implementing procedures to the Emergency Plan.

This response is PLANT SPECIFIC.

**ASSOCIATED VCSNS COLA REVISIONS:**

No COLA changes have been identified as a result of this response.

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**ASSOCIATED ATTACHMENTS:**

None

**NRC RAI Letter No. 023 Dated January 22, 2009**

**SRP Section: 09.05.02 - Communications Systems**

Question from Instrumentation, Controls and Electrical Engineering 1 (ICE1)

**NRC RAI Number: 09.05.02-5**

Demonstrate how the station will utilize computer network connections to augment its emergency communications.

COL Information Item 9.5-9, which is documented in AP1000 DC-FSAR 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."

V.C. Summer COL Emergency Plan Section F(1)(9) states, "The station may also use its public address system, video conferencing system, computer network connections, wireless telephones, station radios and pagers to augment its emergency communications." Provide more detail on the computer network connections and how they will be used to augment emergency communications and whether the station will credit this or the other technologies mentioned in V.C. Summer COL Emergency Plan Section F(1)(9) as actual backup to the emergency communications such that they will satisfy the requirements of Appendix E to 10 CFR Part 50, Part IV.E (9).

**VCSNS RESPONSE:**

The VCSNS Emergency Plan was developed with a goal to address the necessary regulatory requirements while also making provisions for the potential additional redundancy and diversity that is available due to the various non-traditional communication technologies that are now readily available. The detailed design of the communications system is not complete, but the Implementing Procedures will designate which specific technology/technologies is credited as the actual back-up emergency communication method and therefore must satisfy the regulatory requirements necessary to perform that function. The intent is to augment the regulatory requirements with additional, diverse tools that complement the Emergency Response Organization in addition to meeting the basic regulatory requirements.

This response is PLANT SPECIFIC.

**ASSOCIATED VCSNS COLA REVISIONS:**

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No COLA changes have been identified as a result of this response.

**ASSOCIATED ATTACHMENTS:**

None

**NRC RAI Letter No. 023 Dated January 22, 2009**

**SRP Section: 09.05.02 - Communications Systems**

Question from Instrumentation, Controls and Electrical Engineering 1 (ICE1)

**NRC RAI Number: 09.05.02-6**

Provide clarification on transfer capability of the Emergency Communication System from primary dedicated telephone lines to the backup dedicated telephone lines.

COL Information Item 9.5-9, which is documented in AP1000 DC-FSAR 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.”

Section F(1) of the V.C. Summer COL Emergency Plan provides details on the Electric Switch System Exchange(ESSX), the Private Branch Exchange Telephone System (PBX) and the Local Commercial Telephone System. Does the local commercial telephone system serve as a backup to the the ESSX, PBX and all other dedicated links for offsite communications? Also, provide details on the transfer of communications from primary to backup telephones lines and how this issue addresses NRC Bulletin 80-15 in regards to a loss of power event at the station.

**VCSNS RESPONSE:**

The commercial telephone system is the backup for the other dedicated links for offsite communication. In the event of the failure of one of the primary telephone systems, the communicator manually initiates communications using a commercial telephone line as described in the Emergency Implementing Procedures. The Implementing Procedures provide the details for the communications transfer should the primary equipment fail or otherwise be determined to be unacceptable.

This response is PLANT SPECIFIC.

**ASSOCIATED VCSNS COLA REVISIONS:**

No COLA changes have been identified as a result of this response.

**ASSOCIATED ATTACHMENTS:**

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None