



February 18, 2009  
NND-09-0032

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 Response to NRC Request for Additional Information (RAI) Letter No. 025

Reference: Letter from Ravindra G. Joshi (NRC) to Alfred M. Paglia (SCE&G), Request for Additional Information Letter No. 025 Related to SRP Sections 12.03-12.04 for the Virgil C. Summer Nuclear Station Units 2 and 3 Combined License Application, dated January 23, 2009.

The enclosure to this letter provides the South Carolina Electric & Gas Company (SCE&G) response to the RAI items included in the above referenced letter. 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 18<sup>th</sup> day of February, 2009.

Sincerely,

  
Ronald B. Clary  
General Manager  
New Nuclear Deployment

AMM/RBC/am

Enclosure

D083  
NRD

c (with attachment):

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**NRC RAI Letter No. 025 Dated January 23, 2009**

**SRP Section: 12.030-012.04 – Radiation Protection Design Features**

Question from Health Physics Branch (CHPB)

**NRC RAI Number: 12.03-12.04-1**

VC Summer COL FSAR section 12.4.1.9 provides a description of the potential sources of exposure to construction workers. The dose limits to the workers are reviewed by the staff against the standards of 10 CFR 20.1301.

10 CFR 20.1301(a)(1) states "The total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (1 mSv) in a year".

The Staff will review related VC Summer SCOL documents to support an independent assessment of compliance with the regulations. The staff, however, needs additional information to make a determination of reasonable assurance.

The V. C. Summer COL Environmental Report subsection 4.5.3.1.2 states that an Independent Spent Fuel Storage Installation (ISFSI) could be in operation to receive Unit 1 spent nuclear fuel while Unit 3 is still under construction.

VC Summer COL FSAR Subsection 12.4.1.9.2 does not describe whether the ISFSI was considered as a source of direct exposure to construction workers on Units 2 & 3.

Please revise FSAR subsection 12.4.1.9.2 to describe this and any other potential sources of exposure, the potential contribution to construction worker exposure, and provide sufficient information to demonstrate that standards of 10 CFR 20.1301 are met.

**VCSNS RESPONSE:**

As indicated in ER Subsection 4.5.3.1.2, the planned ISFSI "would not begin operation to receive Unit 1 spent nuclear fuel until nearly all the construction activity has ceased." FSAR Subsection 12.4.1.9.2 describes sources of direct radiation; the ISFSI is not mentioned because a design for this facility does not exist at this time and no licensing actions for the facility have begun. When the ISFSI is licensed, its impact on the site, including the construction activity on Units 2 and 3, will be evaluated under the applicable regulations governing each of the facilities. As the ER section indicates, however, based on measurements at other sites containing ISFSIs, the dose to construction workers is expected to be negligible.

This response is PLANT SPECIFIC.

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**ASSOCIATED VCSNS COLA REVISIONS:**

None

**ASSOCIATED ATTACHMENTS:**

None

**NRC RAI Letter No. 025 Dated January 23, 2009**

**SRP Section: 12.030-012.04 – Radiation Protection Design Features**

Question from Health Physics Branch (CHPB)

**NRC RAI Number: 12.03-12.04-2**

V C Summer COL FSAR section 12.4.1.9 provides a description of the potential sources of exposure to construction workers. The dose limits to the workers are reviewed by the staff against the standards of 10 CFR 20.1301.

10 CFR 20.1301 (a)(1) states “The total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (1 mSv) in a year”.

The Staff will review related V C Summer SCOL documents to support an independent assessment of compliance with the regulations, but the staff needs additional information to make a determination of reasonable assurance.

The V C Summer COL FSAR subsection 12.4.1.9.3 discusses sources of exposure from effluents to site construction workers, but the FSAR does not include potential exposure to liquid effluents from Unit 2 while workers are performing liquid waste effluent discharge piping connections.

Please revise FSAR subsection 12.4.1.9.3 to describe this potential source of exposure, the potential contribution to construction worker exposure, and provide sufficient information to demonstrate that the standards of 10 CFR 20.1301 concerning the estimated dose to construction workers due to the liquid waste effluent discharge piping connection between Units 2 and 3 are met.

**VCSNS RESPONSE:**

During the construction of Unit 3, any work involving Unit 2 contaminated liquid waste effluent discharge piping connections will be performed within the existing work control programs of the operating Unit 2 by trained and monitored radiation workers. Hence, this activity is not considered to contribute to unmonitored construction worker doses. FSAR Subsection 12.4.1.9.2 will be revised in a future COLA revision to clarify this, as shown in the ASSOCIATED VCSNS COLA REVISIONS section below.

This response is PLANT SPECIFIC.

**ASSOCIATED VCSNS COLA REVISIONS:**

In a future revision to the COLA, the following paragraph will be inserted at the end of FSAR Subsection 12.4.1.9.2:

While Unit 2 is operating and Unit 3 is under construction, workers may be exposed to liquid effluents from Unit 2 while performing Unit 3 liquid waste effluent discharge piping connections. However, this work will be performed by trained radiation workers, not general site construction workers. Hence, this activity is not considered a contributor to construction worker doses.

**ASSOCIATED ATTACHMENTS:**

None