



May 12, 2015
RC-15-0075

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Attn: S. A. Williams

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
LICENSE AMENDMENT REQUEST – LAR-12-04269
LICENSE BASIS CHANGES IN STEAM GENERATOR TUBE
RUPTURE ANALYSIS
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

References: 1. SCE&G Letter from Thomas D. Gatlin to NRC Document Control Desk,
License Amendment Request – LAR-12-04269, "License Basis Changes in
Steam Generator Tube Rupture Analysis," dated August 27, 2014
[ML14245A408]

2. NRC Letter from Shawn A. Williams to Thomas D. Gatlin, "Virgil C. Summer
Nuclear Station, Unit No. 1, Request for Additional Information Regarding
License Basis Changes in Steam Generator Tube Rupture Analysis (TAC NO.
MF4699)," dated April 13, 2015 [ML15076A118]

South Carolina Electric & Gas Company (SCE&G), acting for itself and as agent for South Carolina Public Service Authority pursuant to 10 CFR 50.90, submitted License Amendment Request (LAR) per Reference 1 concerning license basis changes in the steam generator tube rupture analysis. NRC review of this request determined that additional information was required and a request for additional information (RAI) was issued per Reference 2. This submittal's attachment contains SCE&G's response to the RAIs dated April 13, 2015.

This letter contains a regulatory commitment for VCSNS to provide a new set of three-year meteorological data, along with an update to thermal dispersion factors, to provide responses to RAIs No. 1 and No. 3 by September 11, 2015.

If you have any questions regarding this submittal, please contact Mr. Bruce L. Thompson at (803) 931-5042.

A001
LRR

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

5/12/15
Executed on

Thomas D. Gatlin for TDG
Thomas D. Gatlin

TS/TDG/rp

Attachment I: VCSNS Response to Request for Additional Information
Attachment II: List of Regulatory Commitments

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Files (813.20)
PRSF (RC-15-0075)

**VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12**

ATTACHMENT I

VCSNS RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the Virgil C. Summer Nuclear Station License Amendment Request (LAR), dated August 27, 2014 (Agencywide Documents Access and Management Systems (ADAMS) Accession No. ML14245A408) and supplements dated October 31, 2014, and February 12, 2015 (ADAMS Accession Nos. ML14308A075 and ML15055A143, respectively). The NRC staff has determined that the following requests for additional information (RAI) are required to complete the review.

RAI No. 1

In the NRC staff's Safety Evaluation dated October 4, 2010 (ADAMS Accession No. ML102160020), approving the Alternative Source Term (AST), Section 3.1.1 it states: "However, because of the apparent uncertainties discussed above, the NRC staff notes that these data may not be considered acceptable for use in other dose assessments of other meteorological applications without further NRC review and approval."

Therefore, please provide the most recent 3 years, with 90% recovery rate (per RG 1.230), of current meteorological data so that the staff can perform an assessment of the proposed χ/Qs .

SCE&G Response

The Steam Generator Tube Rupture (SGTR) LAR used the Analysis of Record (AOR) dispersion factors (χ/Qs). These were approved for use under the Alternative Source Term (AST) safety evaluation in 2010. The same dose analysis methodology is used for both the AOR and the current SGTR LAR with similar results. SCE&G believes that a re-analysis of dispersion factors is not necessary for the SGTR LAR.

However, a new set of meteorological data will be submitted along with an update to the thermal dispersion calculation. This effort will require vendor support and calendar time beyond the thirty day RAI response. SCE&G will provide meteorological data in Regulatory Guide 1.23 format, meteorological data in ACRON96 format and the updated calculation for thermal dispersion factors. These items will be submitted to the NRC by September 11, 2015.

RAI No. 2

The NRC staff's previous approval for the Steam Generator Tube Rupture (SGTR) AST did not include an atmospheric dispersion factor for the low population zone from 0-2 hours; however, the reanalysis used a value of 5.06E-5. The application stated that this value was derived from a fuel handling accident analysis. Since a fuel handling accident is different from a SGTR, please justify the use of this value for the SGTR accident analysis.

SCE&G Response

In calculating post-accident χ/Qs with PAVAN for the low population zone (LPZ) at a site, the release point to receptor location (LPZ) is taken to be the same for all of the AST design basis accidents (DBAs) due to the large distance from the release point to the LPZ (approximately 3

miles). The χ/Q is not a function of the activity release characteristics but only the time duration of the release. In all of the AST DBA cases a ground level release is conservatively applied.

RAI No. 3

Page 35 of the August 27, 2014, submittal, states that the atmospheric dispersion factors are presented in Table 11. A review of Table 11 shows that the values used are the same as those contained in the following application:

Letter from SCE&G to NRC, "License Amendment and Related Technical Specification Changes to Implement Full-Scope Alternative Source Term in Accordance with 10 CFR 50.67," February 17, 2009. (ADAMS Accession No. ML090720887)

In the NRC staff's approval of this application it states, "Therefore, the χ/Q values should not be considered acceptable for use in other dose assessments or other meteorological applications without further NRC review and approval."

Given that the staff previously stated that these values should not be considered acceptable, please provide justification for using these values and demonstrate that these values are still appropriate with a more recent data set that does not have the uncertainties that were inherent in the previously provided data set.

SCE&G Response

Under RAI No. 1 above, a new set of meteorological data will be collected and new thermal dispersion factors will be calculated. This data will be submitted to the NRC for closure of the concerns related to the AOR thermal dispersion factors.

**VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12**

ATTACHMENT II

LIST OF REGULATORY COMMITMENTS

The following table identifies the action committed to by the Virgil C. Summer Nuclear Station (VCSNS) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Bruce L. Thompson at (803) 931-5042.

COMMITMENT	DUE DATE/EVENT
VCSNS is to provide a new set of three-year meteorological data, along with an update to thermal dispersion factors, to provide responses to RAs No. 1 and No. 3.	September 11, 2015