



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

March 8, 2018

Mr. George A. Lippard, III
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88, Mail Code 800
Jenkinsville, SC 29065

**SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 – REQUEST FOR
ADDITIONAL INFORMATION RE: INTEGRATED LEAK RATE TEST PEAK
CALCULATED CONTAINMENT INTERNAL PRESSURE CHANGE
(EPID NO. L-2017-LLA-0348)**

Dear Mr. Lippard:

By letter dated October 6, 2017, South Carolina Electric & Gas Company (the licensee) requested changes to the Technical Specifications (TS) for the for Virgil C. Summer Nuclear Plant, Unit 1.

The proposed amendment would increase the Integrated Leak Rate Test Peak Calculated Containment Internal Pressure, Pa, listed in TS 6.8.4.g, "Containment Leakage Rate Testing Program," to remove the reference to Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program," dated September 1995 and ANSI/ANS-56.8-2002, "Containment System Leakage Testing Requirements," and to replace the reference of NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based option of 10 CFR Part 50, Appendix J," with NEI 94-01, Revision 2-A.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal and determined that additional information is needed to complete its review. During a clarification call on March 5, 2018, Ms. Dalick of your staff requested 45 days from the date of this letter to respond to the NRC request for additional information. The NRC staff agreed to this request but notes that the NRC staff's review is continuing, and further requests for information may be developed.

G. Lippard

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If you have any questions, please contact me at 301-415-1009 or Shawn.Williams@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Shawn Williams". The signature is fluid and cursive, with a long horizontal stroke at the end.

Shawn A. Williams, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosure:
Request for Additional Information

cc w/enclosure: Listserv

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

INTEGRATED LEAK RATE TEST PEAK CALCULATED CONTAINMENT

INTERNAL PRESSURE CHANGE

SOUTH CAROLINA ELECTRIC & GAS COMPANY

VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-395

By letter dated October 6, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17279A715), South Carolina Electric & Gas Company (the licensee) requested changes to the Technical Specifications (TS) for the for Virgil C. Summer Nuclear Plant, Unit 1.

The proposed amendment would increase the Integrated Leak Rate Test (ILRT) Peak Calculated Containment Internal Pressure, Pa, listed in TS 6.8.4.g, "Containment Leakage Rate Testing Program," to remove the reference to Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program," dated September 1995 and ANSI/ANS-56.8-2002, "Containment System Leakage Testing Requirements," and to replace the reference of NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J" (ADAMS Accession No. ML12221A202) with NEI 94-01, Revision 2-A (ADAMS Accession No. ML100620847).

The NRC staff has determined that the following requests for additional information (RAI) are required to complete its review.

RAI 1:

Regulatory Basis - 10 CFR Part 50, Appendix A, Criterion 50, Containment design basis

The reactor containment structure, including access openings, penetrations, and the containment heat removal system shall be designed so that the containment structure and its internal compartments can accommodate, without exceeding the design leakage rate and with sufficient margin, the calculated pressure and temperature conditions resulting from any loss-of-coolant accident. This margin shall reflect consideration of (1) the effects of potential energy sources which have not been included in the determination of the peak conditions, such as energy in steam generators and as required by § 50.44 energy from metal-water and other chemical reactions that may result from degradation but not total failure of emergency core cooling functioning, (2) the limited experience and experimental data available for defining accident phenomena and containment responses, and (3) the conservatism of the calculational model and input parameters.

Enclosure

Section 3.3 of the Reference 1 Enclosure states, in part, that:

modeling corrections were applied that slightly altered certain initial conditions in FSAR [Final Safety Analysis Report] Table 6.2-2.

Please describe the modelling correction in the Mass and Energy (M&E) release analysis that resulted in the change in the initial conditions.

RAI 2:

Regulatory Basis - Same as RAI 1.

Except for the change in inputs, based on the Nuclear Safety Advisory Letters 06-6, 11-5, and 14-2, please confirm that the remaining inputs and assumptions for the M&E release, containment pressure, vapor temperature, and sump temperature response analyses are the same as in the plant analysis of record. Please state the differences in the inputs and assumptions, if any, with those in the plant analysis of record. Please justify in any conservatism is reduced in these inputs and assumptions.

RAI 3:

Regulatory Basis - Same as RAI 1.

On page 9 of the Enclosure, the licensee states:

For the DEHL [Double-Ended Hot Leg] case, the releases were calculated only for the blowdown.

Please provide justification for not calculating the M&E releases and containment response for the remaining three phases of the DEHL break Loss-of-Coolant Accident, and explain quantitatively why the Double-Ended Pump Suction cases bound the plant analysis or record for the long term containment and sump temperature responses.

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CALCULATED CONTAINMENT INTERNAL PRESSURE CHANGE
(EPID NO. L-2017-LLA-0348) DATED MARCH 8, 2018

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ADAMS Accession No. ML18066A000***via email**

OFFICE	DORL/LPLII-1/PM	DORL/LPLII-1/LA	NRR/DSS/SRXB/BC*
NAME	SWilliams	KGoldstein	JWhitman* (A)
DATE	3/7/18	3/7/18	2/26/18
OFFICE	DORL/LPLII-1/BC	DORL/LPLII-1/PM	
NAME	MMarkley w/changes	SWilliams	
DATE	3/7/18	3/8/18	

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