SOUTH CAROLINA ELECTRIC & GAS COMPANY
POST OFFICE 764
COLUMBIA, SOUTH CAROLINA 29218

O. W. DIXON, JR.
VICE PRESIDENT
NUCLEAR OPERATIONS

October 30, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Reactor Coolant System Flow

Dear Mr. Denton:

On June 19, 1984, South Carolina Electric and Gas Company (SCE&G) submitted a request to amend the Technical Specifications for the Virgil C. Summer Nuclear Station. This request involved changes in the measurement uncertainty for the Reactor Coolant System (RCS) flow rate and defined allowable power levels for an RCS flow rate less than 100% of Thermal Design flow. During the review of this submittal, the Staff had several questions about the proposed Technical Specification changes. This letter is provided in response to those questions.

The first question requested the value for the thermal design flow rate in gallons per minute (GPM). The design flow rate for the Virgil C. Summer Nuclear Station is 98,000 GPM per loop, or 294,000 GPM total.

The second question concerns the values calculated for the digital voltmeter (DVM) elbow tap indication uncertainty for one loop and correspondingly for three loops as stated in Table 4 of the June 19, 1984 letter. In re-verifying these values, it has been determined that the uncertainties, as listed at the bottom of Table 4, are incorrect. The correct uncertainties, using the input values and the statistical summation method found in Table 4, are $\pm$ 1.555% as opposed to $\pm$ 1.535% for the total loop channel uncertainty with 1 tap and $\pm$ 0.898% as opposed to $\pm$ 0.886% for the total RCS channel uncertainty with 3 loops.

The third question requests confirmation of the value in Table 5 of the July 19, 1984 letter for the total RCS elbow tap channel uncertainty utilizing DVM readings. The correct value for the total RCS elbow tap channel uncertainty utilizing DVM readings is $\pm$ 2.00%. This value has been increased slightly from the value

DESIGNATED ORIGINAL

Certified By

A001

of ±1.99% as a result of the changes noted in response to the previous question. However, this increase does not change the total RCS flow measurement uncertainty. As stated in Table 5, the total RCS uncertainty is ± 2.0%.

The fourth question addresses the possibility of crud buildup and its associated uncertainty factor. SCE&G is scheduled to perform a modification during the present refueling outage to install inspection ports at the feedwater venturi nozzles. This modification will allow for visual inspection and cleaning of the nozzles. These nozzles will be cleaned with a high pressure water spray at each refueling to mitigate crud buildup. It is SCE&G's position that the installation of this modification and the cleaning to be conducted prior to startup of each cycle obviates the need for including additional uncertainty in the total calorimetric uncertainty to account for crud buildup.

In re-examining the July 19, 1984 submittal, an error was discovered on the marked up Technical Specification Figure 3.2-3, "RCS Flow Rate Versus R." The RCS total flowrate for a 98% power level should be 29.69×10^4 GPM as opposed to the 29.67×10^4 GPM indicated on the marked up figure. Flowrates for all other indicated power levels have been reverified and are correctly stated in the July 19, 1984 letter.

If you have any further questions, please advise.

Very truly yours,

O. W. Dixon, Jr.

AMM/OWD/gj

cc: V. C. Summer
T. C. Nichols, Jr./O. W. Dixon, Jr.
E. H. Crews, Jr.
E. C. Roberts
W. A. Williams, Jr.
D. A. Nauman
J. P. O'Reilly
Group Managers
O. S. Bradham
C. A. Price
C. L. Ligon (NSRC)
K. E. Nodland
R. A. Stough
G. Percival
C. W. Hehl
J. B. Knotts, Jr.
H. G. Shealy
NPCF
File