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

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

October 18, 1985

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

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Shutdown Margin-Modes 3, 4 and 5

Dear Mr. Denton:

In a letter dated 03/06/85 from O. W. Dixon, Jr., to H. R. Denton, South Carolina Electric and Gas Company (SCE&G) submitted a Technical Specification change request to address boron dilution events for Cycles 3 and beyond. On October 16, 1985 SCE&G was notified by Westinghouse Electric Corporation that the analysis used in support of the Cycle 3 amendment request was less conservative when compared to the currently accepted Westinghouse methodology. Therefore, SCE&G requests that the Technical Specifications be revised as indicated on the attached marked-up pages. This amended request, as described in the following paragraphs, is being requested to ensure that appropriately conservative requirements are maintained in the event of a boron dilution event in Modes 3, 4 and 5.

The currently accepted Westinghouse methodology now takes into consideration the non-linear flux response to the dilution event and concomitant non-linear behavior of the indicated source range count rate. When the non-linear behavior of the flux response is modeled in the analysis, the available time for the operator to detect and shutdown the dilution event is reduced.

This revised request does not represent a significant change from the previous request in that operators will still have action time consistent with that available at the time of licensing for Cycle 1 to terminate an inadvertent boron dilution in Modes 3, 4, and 5 following receipt of a high flux at shutdown alarm. The proposed change will still define the required shutdown margin as a function of the Reactor Coolant System (RCS) boron concentration, although the required shutdown margin increases at a faster rate with a higher RCS boron concentration due to the refinement in the methodology.

The attached revised Technical Specification Figure 3.1-3 is being submitted for review. Changes to Technical Specification pages 3/4 1-3 and B 3/4 1-1 remain as requested in our March 6, 1985 submittal, but are enclosed for completeness.

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Due to the inherent conservatisms used in the currently accepted Westinghouse methodology, SCE&G feels that should an uncontrolled boron dilution event occur, sufficient operator action time would be available to terminate the event before achieving criticality. SCE&G maintains that a finding of no significant hazards is still appropriate as determined in our March 6, 1985 submittal, taking into consideration the identified refinement to the methodology.

This change has been reviewed and approved by both the Plant Safety Review Committee and the Nuclear Safety Review Committee. The fee for processing this amendment has been submitted previously with the March 6, 1985 submittal.

If you have any questions, please advise.

Very truly yours,

O. W. Dixon, Jr.

AMM:OWD:tdh

c: 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
Group Managers
O. S. Bradham
C. A. Price
S. R. Hunt
C. L. Ligon (NSRC)
K. E. Nodland
R. A. Stough
G. O. Percival
NRC Site Inspector
J. B. Knotts, Jr.
Chief, Core Performance Branch
I & E Washington
NPCF
File