

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE 784

COLUMBIA, SOUTH CAROLINA 29218

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

February 17, 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
Inadequate Core Cooling,
NUREG-0737, II.F.2

Reference: Thomas L. Novak letter to
O. W. Dixon, Jr., dated 1/12/84

Dear Mr. Denton:

In the referenced letter the NRC summarized its review of the Reactor Coolant Inventory Tracking System, Core Exit Thermocouple System, and Subcooling Margin Monitor System utilized at the Virgil C. Summer Nuclear Station. Also identified were several questions and concerns which are addressed in this response.

1. The Staff has stated that the proposed backup core exit thermocouple display is not satisfactory since qualified equipment is required for the backup display. In our letter of August 26, 1983, from O. W. Dixon, Jr. to Harold R. Denton, South Carolina Electric and Gas Company (SCE&G) stated that, in accordance with NUREG-0737, II.F.2, Appendix B, Criterion 1, and Regulatory Guide 1.97, Revision 2, the backup thermocouple display would not be qualified since it was a computer based display, and isolation of the 1E input signals would be provided in an accessible location. Regulatory Guide 1.97, Revision 2, Paragraph 1.3.1 states that for category 1 instrumentation, "where the instrumentation channel signal is to be used in a computer based display..., qualification applies from the sensor to and includes the channel isolation device." Before proceeding with this design, SCE&G obtained concurrence on the interpretation of qualification requirements from the Staff during telephone conversations in May 1983. Based on these conversations, SCE&G transmitted its August 26, 1983, letter and proceeded with design and procurement to implement a system using thermocouple isolators and the present subcooling margin monitor.

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Additionally, the following is provided as justification for acceptability of the current backup thermocouple display:

- a) The present Westinghouse subcooling margin monitor which is used as the backup thermocouple display was purchased in spring 1980 and was designed and built to meet NUREG-0578 requirements.
 - b) The analog isolator cabinets will be located in a room directly beneath the main control room in an easily accessible area. In the unlikely event that the subcooling margin monitor is rendered inoperable from a seismic event, thermocouple readings can be manually taken at the isolator cabinets.
2. The Staff has stated that it is not clear where the reference junction compensation equipment is located. Through the use of containment electrical penetrations with cromel and alumel conductors, the need for reference junctions inside containment has been eliminated. The reference junction compensation will be electronically performed at the input to the analog isolators which are located in the Control Building in a mild environment.

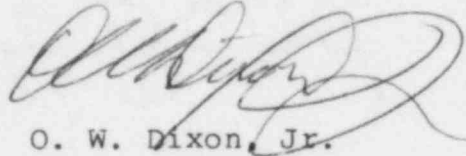
SCE&G provides the following schedule for responding to Enclosure 2, Item 3 and Enclosure 3 of Mr. Novak's January 12, 1984, letter:

1. Enclosure 2, Item 3 - April 13, 1984.
2. Enclosure 3 - April 13, 1984.

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Should there be any questions, please notify us at your convenience.

Very truly yours,



O. W. Dixon, Jr.

JG:OWD/fjc

cc: V. C. Summer
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