SOUTH CAROLINA ELECTRIC & GAS COMPANY
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T. C. NICHOLS, JR.
VICE PRESIDENT AND GROUP EXECUTIVE
NUCLEAR OPERATIONS

September 11, 1981

Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II, Suite 3100
101 Marietta Street, N. W.
Atlanta, GA 30303

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Reportable Substantial Safety Hazard
Pinched Wires in Motor Control Centers
Nuclear Eng. File: 3.1051

Dear Mr. O'Reilly:

On February 4, 1981, a potential substantial safety hazard as defined by 10CFR21 was reported to John Rausch at NRC Region II office. On March 10, 1981 an interim report was sent to NRC Region II. On May 4, 1981 the item was upgraded to a Substantial Safety Hazard and on May 27, 1981 an interim report was sent to NRC Region II.

The item involves pinched wire in Square D Co. 1E 480 Volt Motor Control Centers.

Details of the Substantial Safety Hazard are found in the attached final report.

Very truly yours,

T. C. Nichols, Jr.

TB:TCN:tdh

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cc: V. C. Summer
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10CFR - SUBSTANTIAL SAFETY HAZARD

1. Name and Address of Reporting Individual

Tom Brewer
South Carolina Electric and Gas Company
P. O. Box 764
Columbia, SC 29218

2. Identification of Basic Component

480 Volt Motor Control Center

3. Identification of Firm Supplying Component

Square D Company
252 North Tippecanoe
Peru, Indiana 46970

4. Nature of Defect, Substantial Safety Hazard Created, and Evaluation

The problem involves pinching of some stab wires against tie channels in Class 1E motor control centers. There was evidence of pinching, but there has been no failures in Class 1E motor control centers. If the pinched wire was allowed to remain in that condition for a number of years, it is possible that the insulation of the wire could crack or split and cause a fault from the hot lead to ground.

For the worst case analysis, if we assume that all the motor control center cubicals that had a possibility of failing, did fail then we could have lost the following equipment:

1.	DG Room A Exhaust Fan A	XFN 0075A-AH
2.	DG Room A Exhaust Fan B	XFN 0075B-AH
3.	DG 1A Diesel Power Panel	XPN 0047-DG
4.	DG 1B Diesel Power Panel	XPN 0048-DG
5.	DG Room B Supply Fan B	XFN 0045B-AH
6.	Service water pump house supply fan	XFN 0080A-AH
7.	Service Water Screen Wash Pump B	XPP 0044B-SW

5. Date Information of Defect Was Obtained

6. Number and Location of Defect

Motor Control Centers XMC1DA2Z - Units 4GI, 4JL, 2LM, 1GI; XMC1DB2Z - Units 2JM, 1GI, 3DF; XMC-1ea1X Unit 1GI; XMC1EB1X - Units 1GI

7. Corrective Action

Square D Engineering and SCE&G inspected the motor control centers for possible pinched wire problems. Potential problem areas were with units with starter sizes 3 or 4, 225A frame circuit breakers units, and twin FA frame circuit breakers units which are located in the motor control center space beginning with space factors D, G or J. Units of the above description had a potential of having pinching between the back of the MCC can and the tie channel.

The units with potential problems were identified and the units were reassigned a new location where there is not possibility of pinched wire. All the electrical modifications are complete. Square D Company has developed a version of the tie channel which eliminates the pinched wire problem, but it has not been seismically qualified at this time. Square D Company has said that they intend to qualify the modified version in the next motor control center seismic test.

8. Advice to Purchasers or Licensees

Purchase the new motor control center with the new revised tie channel after Square D Co. seismicly tests them.