

50-395

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE BOX 764

COLUMBIA, SOUTH CAROLINA 29218

E. H. CREWS, JR.
VICE-PRESIDENT AND GROUP EXECUTIVE
ENGINEERING AND CONSTRUCTION

July 21, 1980

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

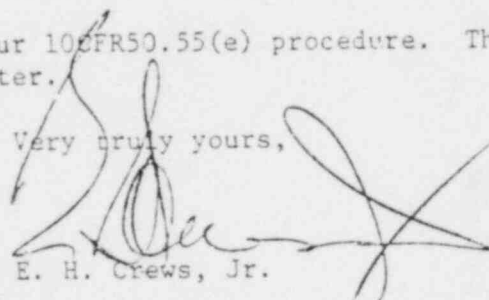
Subject: Virgil C. Summer Nuclear Station, Unit 1
Reportable Substantial Safety Hazard
and Significant Deficiency Diesel Generator Prelube Oil
Pump Continuous Operation

Dear Mr. O'Reilly:

On June 27, 1980, a substantial safety hazard and significant deficiency as defined by 10CFR21 and 10CFR50.55(e) was reported to Mr. C. R. McFarland at the NRC Region II office. The item involved possible failure of the diesel generators to start as a result of flooding if the rocker arm prelube oil pump operated continuously while the diesel was in the standby position. Details are given on the attachment.

The item is being reported under our 10CFR50.55(e) procedure. This is considered a final report on the matter.

Very truly yours,



E. H. Crews, Jr.

JAW:rm

Enclosure

CC: United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Washington, DC 20555

United States Nuclear Regulatory Commission
Document Management Branch
Washington, DC 20555

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Mr. James P. O'Reilly
Page 2

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File

10CFR21 - SUBSTANTIAL SAFETY HAZARD

1. Name and Address of Reporting Individual

James A. Wactor South Carolina Electric & Gas Company P. O. Box 764
Columbia, SC 29218

2. Identification of Basic Component

Diesel Generator Rocker Arm Prelube Oil Pumps

3. Identification of Firm Supplying Component

Colt Industries Fairbanks Morse Engine Division 701 Lawton Avenue
Beloit, WI 53511

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

The item involved the continuous operation of the diesel generator rocker arm prelube oil pump. This pump is intended to provide lubrication to the rocker arm and valve portion of the diesel while in the standby position to reduce the wear that could occur in an emergency start if the lubrication drained off the parts over long standby periods.

The pump is not safety related and the diesel will start and operate without it. However, the manufacturer is concerned that under continuous operation, lube oil could leak around the valve stems into the engine cylinders and cause flooding or even fill the cylinder up, creating a hydraulic lock when a start is attempted.

The control of the pump was designed in accordance with manufacturer's drawings with an "on-off-automatic" switch. The pump ran continuously in the "on" position. In the "automatic" position the pump ran continuously when the diesel was in the standby position and shutdown only when the diesel was started. The manufacturer claims they designed the circuit this way because the specification called for all "on-off-automatic" switches on the controls. The manufacturer says their other customers have only "on-off" switches.

Since the problem was caused by poor communications between the manufacturer and the engineer, it is being reported as a significant deficiency and a substantial safety hazard.

5. Date Information of Defect was Obtained

May 2, 1980

6. Number and Location of Defect

There is one prelube pump for each diesel generator.

7. Corrective Action

The pump controls will be revised to operate for a short period each day. The exact length of time to be determined by the manufacturer.

8. Advice to Purchasers or Licensees

None