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

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

March 11, 1983

Mr. James P. O'Reilly
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II, Suite 2900
101 Marietta Street, N.W.
Atlanta, Georgia 30303

SUBJECT: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Thirty Day Written Report
LER 83-013

Dear Mr. O'Reilly:

Please find attached Licensee Event Report #83-013 for Virgil C. Summer Nuclear Station. This Thirty Day Report is required by Technical Specification 6.9.1.13.(b) as a result of entry into Action Statement (a) of Technical Specifications 3.3.3.5, "Remote Shutdown Instrumentation," and 3.3.3.6, "Accident Monitoring Instrumentation," on January 13 and 19, 1983. The submittal of this report is late because the occurrence was not initially documented for NRC reportability in compliance with Technical Specification 6.9.1.13. As a result of a subsequent review of associated station documents, the reportability was identified, and is now being submitted accordingly.

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

Very truly yours,

O. W. Dixon, Jr.

CJM:OWD:dwf/fjc
Attachment

cc: V. C. Summer
T. C. Nichols, Jr.
E. C. Roberts
O. W. Dixon, Jr.
H. N. Cyrus
H. T. Babb
D. A. Nauman
M. B. Whitaker, Jr.
W. A. Williams, Jr.
O. S. Bradham
R. B. Clary
C. A. Price
A. R. Koon
G. D. Moffatt
Site QA
C. L. Ligon (NSRC)
G. J. Braddick
J. C. Miller
J. L. Skolds
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DETAILED DESCRIPTION OF EVENT

On January 13, 1983, at 0910 hours, with the Plant in Mode 1, the Condensate Storage Tank level indication (LI-3631A) failed high. This is a Post Accident Monitoring System (PAMS) instrument, and Action Statement (a) of Technical Specification 3.3.3.6 applied.

The investigation performed by maintenance personnel not only discovered that the previously mentioned failure was due to frozen instrument lines on level transmitter LT-3631, but also identified that the adjacent level transmitter (LT-3631A), which provided indication to the Control Room Evacuation Panel (CREP), was inoperable because of the same frozen lines. The personnel failed to report the additional failure to Operations personnel because they did not realize the significance of the CREP indication in regards to Technical Specification 3.3.3.5.

On January 19, 1983, at 0849 hours, with the Plant in Mode 1, an additional failure of the same instrument channels occurred due to the same circumstances as the January 13, 1983, occurrence.

PROBABLE CONSEQUENCES

There were no adverse consequences from either of the events since level indication was available from the redundant Condensate Storage Tank level indicator (LI-3621A).

CAUSE(S) OF THE OCCURRENCE

The failure of the Condensate Storage Tank level instrumentation was due to frozen instrument lines. The temperature sensing element for the heat trace system was not located per design and consequently failed to detect the actual temperature of the instrument lines.

IMMEDIATE CORRECTIVE ACTIONS TAKEN

The investigation performed on January 13, 1983, indicated that LT-3631 had failed because of frozen instrument lines. Maintenance personnel found that the same condition existed on the adjacent level transmitter LT-3631A, which provided indication to the CREP. The heat trace system was verified to be functional but due to the location of the temperature sensing element had failed to detect the actual temperature of the instrument lines. Heat was applied, and the transmitter instrument lines were thawed out. LT-3631 was returned to operable status on January 14, 1983, at 2045 hours, upon the satisfactory completion of a Channel Check. Operations personnel did not perform a Channel Check on the CREP indication since they were still unaware of the failure discovered by Maintenance. An engineering evaluation was subsequently initiated on the failure of the heat trace system to detect actual instrument line temperature in order to prevent recurrence.

Prior to the completion of the engineering evaluation, a repeat of the failure occurred on January 19, 1983, at 0849 hours. As in the previous occurrence on January 13, 1983, Operations personnel were unaware of the possible loss of the CREP indication because of the common transmitter instrument lines. Maintenance personnel bypassed the automatic controls of the heat trace system and left the system in the energized mode of operation. The transmitters were returned to operable status by 1015 hours on January 19, 1983. The performance of a satisfactory Channel Check of the CREP instrumentation on February 3, 1983, provides assurance that transmitter LT-3631A was also returned to operable status at the same time as the Main Control Board indication from LT-3631.

The temperature sensing element for this portion of the heat trace system on the Condensate Storage Tank level instrumentation was determined to be installed in the wrong location. The element was relocated on February 9, 1983, to the design location, and the heat trace system was returned to normal operation.

ACTION TAKEN TO PREVENT RECURRENCE

The licensee has relocated the temperature sensing element for the heat trace system for Condensate Storage Tank level transmitters LT-3631 and LT-3631A. An insulated enclosure was also installed on all of the tank level transmitters in order to provide additional freeze protection.