

FLORIDA POWER & LIGHT COMPANY

March 14, 1975



Mr. Edson G. Case, Acting Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Case:

ABNORMAL OCCURRENCE NO. 251-75-3
MARCH 12, 1975
OCCURRENCE DATE: MARCH 4, 1975
TURKEY POINT UNIT NO. 4

STEAM GENERATOR PROTECTION SYSTEM
CHANNEL II - LOW STEAM LINE PRESSURE COMPARATOR FAILURE

A. CONDITIONS PRIOR TO OCCURRENCE

The reactor was in steady-state power operation at 100% reactor power. Steam Generator Protection System Channel II was in the tripped mode to perform a periodic functional test on this channel.

B. DESCRIPTION OF OCCURRENCE

During the performance of the periodic functional test, the test signal input did not trip Channel II low steam line pressure comparator (PC-4-474A) as the signal was decreased below the expected trip setpoint (equivalent to 600 psig). After the test signal was reduced significantly below the expected trip setpoint, the comparator tripped.

C. CAUSE OF OCCURRENCE

Extensive tests of the comparator revealed a failed capacitor in the -15V d.c. instrument power supply. Failure of this capacitor allowed an a.c. signal to be superimposed on the internal d.c. signal in the comparator. This caused the failure of the comparator to trip at the expected setpoint value equivalent to 600 psig.

D. ANALYSIS OF OCCURRENCE

The incidents analyzed and presented in the Turkey Point Unit Nos. 3 and 4 Final Safety Analysis Report assume conservative

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Mr. Edson G. Case, Acting Director
Page Two
March 14, 1975

values for instrument error in measuring pressure, time delays associated with tripping functions, and maximum trip setpoints assumed for analysis. In these analyses, actuation of one out of two redundant protection channels or any two out of three redundant protection channels will initiate the necessary protective actions.

Functional tests of the two redundant steam generator protection system channels III and IV demonstrated that both of these protection channels were operable.

Review, analyses, and evaluation of reactor operating conditions during this occurrence concluded that the reactor was protected at all times by two redundant operable protection channels. Therefore, neither reactor safety nor the health and safety of the public were jeopardized by this occurrence.

E. CORRECTIVE ACTION

The faulty comparator was replaced with a calibrated spare comparator. Functional tests performed after the spare comparator was installed, demonstrated that the comparator performance was satisfactory.

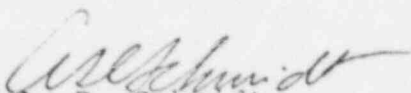
There was no evidence of generic failure.

F. FAILURE DATA

Review of operating and failure reports show that on September 6, 1974, during the performance of a periodic functional test on No. 3C Steam Generator, the failure of low-low level comparator (LC-3-495A) was identified. Refer to A.O. 250-74-10 for further details.

The failed low steam line pressure comparator, PC-4-474A, was manufactured by Hagan Controls Corporation. Single Comparator, A.C. Output, Model No. 4111082-001.

Very truly yours,


A. D. Schmidt
Vice President
Power Resources

VTC/cpc

cc: Mr. Norman C. Moseley
Jack R. Newman, Esquire