



September 16, 1974



Mr. Edson G. Case, Acting Director
Directorate of Licensing
Office of Regulation
U.S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Case:

ABNORMAL OCCURRENCE NO. 250-74-10

SEPTEMBER 16, 1974

OCCURRENCE DATE: SEPTEMBER 6, 1974

TURKEY POINT UNIT 3

FAILURE OF STEAM GENERATOR LO-LO LEVEL COMPARATORA. CONDITION PRIOR TO OCCURRENCE

The reactor was in routine operation at 98% power.

B. DESCRIPTION OF OCCURRENCE

At 3:00 a.m. on September 6, 1974, performance of the periodic test of the steam generator protection channels revealed that one of the C steam generator Lo-Lo water level comparators would not trip at the required value. Each steam generator has three Lo-Lo water level protection channels which trip at a level of 15%. The individual trips feed into a 2/3 logic which produces a reactor trip and start of the auxiliary feed-water pumps.

The other two channels of the C steam generator tripped as required when tested.

Periodic testing of the steam generator protection channels is performed on a monthly basis. The testing consists of placing the channel in the test mode and verifying trip actuation using a transmitter simulator, digital voltmeter and installed indicating lights.

C. CAUSE OF THE OCCURRENCE

Bench testing of the defective comparator revealed that the -15 volt DC power supply filter capacitor had failed. This caused erratic operation of the comparator near the setpoint.

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The comparator did not indicate trip until the input was considerably below the setpoint. Evidence of trip actuation at setpoint was not demonstrated by the indicating light although there was an indication that the output relay may have operated as required.

D. ANALYSIS OF THE OCCURRENCE

The comparator failure represents a single failure in a redundant system. For protective functions where two-out-of-three redundant actuation is provided, a single channel failure is not considered to impair the protective function. Consequently, neither reactor safety nor the health and safety of the public was endangered by this occurrence.

E. CORRECTIVE ACTION

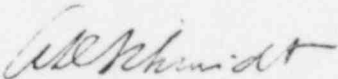
Corrective Action consisted of replacing the defective comparator with a calibrated spare unit which was functionally tested with satisfactory results.

At this time, there is no indication that the comparator failure is a generic problem. For this reason, additional action was not deemed necessary.

F. FAILURE DATA

This occurrence represents the first non-failsafe failure of a comparator in a nuclear safety related system since startup of the plant.

Very truly yours,



A. D. Schmidt
Director of Power Resources

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