

LICENSEE EVENT REPORT
NARRATIVE REPORT
TMI-II
LER 82-036/03L-0
EVENT DATE - October 28, 1982

I. EXPLANATION OF OCCURRENCE

At 1500 hours on October 28, 1982, while performing semi-annual surveillance 4333-SAL on the fire detectors in the Unit 2 River Water Pump House (RWPH), all the detectors failed to test satisfactorily. This failure placed the unit in the Action Statement of Technical Specification Limiting Conditions for Operation (L.C.O.) 3.3.3.8, Table 3.3-11.

The detectors were tested satisfactorily and returned to operable status at 2130 hours on November 5, 1982. This event is considered reportable under Technical Specification 6.9.2.

This LER is similar in nature to LER 82-13.

II. CAUSE OF THE OCCURRENCE

While the Unit 2 RWPH fire detectors system design provides multiple detectors and the Tech Spec L.C.O. requires only one to be operable, the system is vulnerable to a common mode of failure in the Fire Indicating Unit (FIU) high voltage power supply. In this case, capacitor C-5 of the high voltage power supply failed thus rendering all of the RWPH fire detectors inoperable.

The high voltage dc power to the fire detectors is electronically supervised to detect either a loss of the 250Vdc supply or a break in the lines to the detectors. If either occurs, a trouble alarm is actuated at both the local FIU panel and in the Control Room. However, the inoperability was a result of a partial failure at the 250Vdc power supply. Apparently, sufficient voltage remained so as to not trip the trouble alarms but still disable the fire detection system.

This LER is similar to LER 82-13 in which the transformer of the high voltage power supply in a Containment Building fire detection system malfunctioned. It resulted in rendering that fire detection system inoperable without generating trouble alarms.

IV. CORRECTIVE ACTIONS TAKEN OR TO BE TAKEN

Immediate

An hourly fire watch was established as required by the Tech Spec L.C.O. Action Statement. Troubleshooting, repairing, and testing were accomplished within the allowable time limit of the Action Statement.

Long Term

GPU is examining the fire detection systems to determine the most appropriate action. This LER will be revised upon completion of the examination.

V. COMPONENT FAILURE DATA

Capacitor C-5 40MFD, 450WV, 85°C, #75254 Manufacturer's Code