

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Unit 2 Susquehanna Steam Electric Station	DOCKET NUMBER (2) 0 5 0 0 0 3 8 8	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

DESCRIPTION OF EVENT

At 0625 hours on January 14, 1993, with Unit 2 in Condition 1 at 100% power, the alarm for Instrument AC (EIIS CODE: EF) Panel 2Y226 Power Failure was received in the control room. Approximately three to five minutes later, additional alarms and invalid Engineered Safety Feature (ESF) actuations occurred as containment isolations of the Reactor Water Cleanup System (RWCU; EIIS Code: CE), 'B' Loop of Containment Atmosphere Control (CAC; EIIS Code: VB) and Drywell Floor Drain Sump lines (EIIS Code: BD). Non-ESF trips of the 'B' Containment Hi Rad Monitor (EIIS Code: IL) and the 'B1' Containment Rad Monitor Pump (EIIS Code: IL) and an auto swap of the Containment Instrument Gas (CIG; EIIS Code: LD) 150 pound header to its backup nitrogen bottles. also occurred.

CAUSE OF EVENT

The cause of the initial Instrument AC Panel 2Y226 Power Failure alarm was due to failure of a rectifier on the Loss of Voltage Relay located in Panel 2Y226. Voltage readings were taken immediately following the event and were found to be normal.

Additional checks of the physical integrity of the Instrument AC system were performed and voltage readings were taken at the 480 VAC and 208/120 VAC levels and were monitored for three days. No perturbations or any other problems were observed. The on-shift operating personnel were interviewed to ascertain if any human error could have led to the momentary loss of power. No human errors were identified. As such, the root cause of the momentary voltage dip of the 120 VAC power, which resulted in the invalid ESF actuations and non-ESF trips, was attributed to the Loss of Voltage Relay rectifier failure.

REPORTABILITY/ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(iv) in that unplanned, invalid ESF actuations occurred following a momentary voltage dip on the 120 VAC power from Instrument AC Panel 2Y226.

Per 10CFR50.73, invalid ESF actuations include those actuations due to spurious signals, human error and equipment failures. Since no actual voltage perturbations occurred anywhere else in the plant, except locally at Panel 2Y226 due to the Loss of Voltage Relay rectifier failure, it was concluded that the momentary voltage dip at Panel 2Y226 and the unplanned actuations constituted invalid ESF actuations. Per 10CFR50.73, invalid ESF actuations of the RWCU System are exempt from the ESF reporting requirement. However, invalid ESF actuations of the CAC and Reactor Building Drain Sump isolation valves are not exempt from the ESF reporting criteria.

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