

# Jersey Central Power & Light Company



MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 201-539-6111

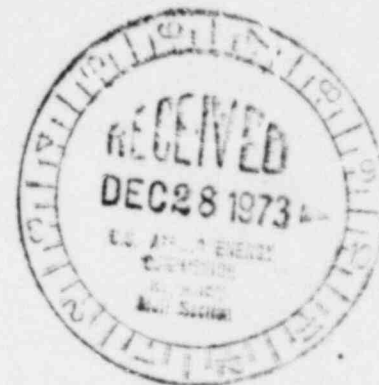
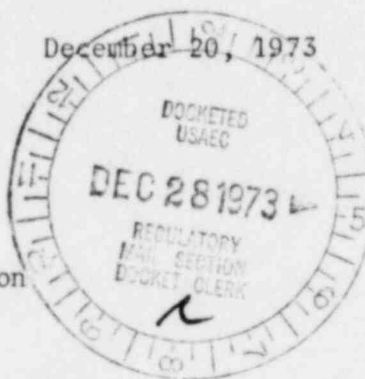
MEMBER OF THE

General



Public Utilities Corporation

December 20, 1973



Mr. A. Giambusso  
Deputy Director for Reactor Projects  
Directorate of Licensing  
United States Atomic Energy Commission  
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station  
Docket No. 50-219  
Damaged Relay

The purpose of this letter is to report to you, as a matter of interest, the threatened failure of relay 6K43 in the plant protection system. This relay is one of two relays which causes operation of the torus to reactor building vacuum breaker block valves. It is a normally energized relay which maintains closed contacts in the valve circuit for closing the block valves, V-26-18 and V-26-16. The function of these valves is to assure that the primary containment is not operated at a negative pressure relative to the reactor building. Should either one of two differential pressure switches trip on the given setpoint of 0.5 psig, its associate relay 6K43 or 6K44 will de-energize with the subsequent opening of the block valves.

On November 21, 1973 at 12:41 p.m., smoke was observed emanating from relay 6K43, located in panel 10F in the control room. The function of the relay was determined, and at 1:05 p.m., an instrument technician, upon instruction from the shift foreman, deenergized the relay to avoid any possibility of damaging adjacent wires and relays. A jumper was then placed across the contacts in the valve circuit which again closed the valves. The valves remained open for approximately one minute, which essentially is the amount of time they are open while performing the normal monthly surveillance test. While the valves were closed in this manner, the redundant pressure switch associated with relay 6K44 would have performed the pressure protection function.

The damaged relay was removed and a new relay of higher voltage was installed. A surveillance test was performed and the system was returned to normal by 3:49 p.m. Since the incident, the bus voltage has been reduced from the prior 125V AC value to 120V AC.

The damaged relay was removed to the electrical shop for testing; however, the cause of the failure could not be determined. The relay will be sent to the vendor's testing lab for further evaluation. The relay was a

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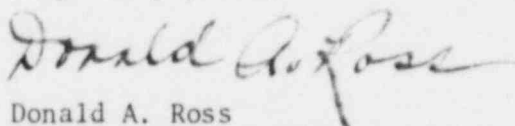
General Electric Control Industrial Relay, Serial No. CR120A 02202AA, 300V AC, 10 amp maximum 115V, 60 cycle, coil series A.

During the period when the temporary jumper was installed (1:06 p.m. - 3:30 p.m.), the redundancy of two pressure switches was lost. However, one pressure switch is capable of causing the valves to open. In addition, a switch in the control room could have been used to open the valves should it have been required. The conditions that would cause the torus to go negative would evolve generally after an extended period of time, following a loss of coolant accident. Consequently, sufficient time for action would have been available. More importantly was the necessity to maintain the primary containment integrity provided by these valves. Consequently, keeping the valves closed rather than letting them remain open during the repair was justified.

As per prior General Electric recommendations, failed relays will be replaced with ones of a higher voltage rating. Further action will be considered based upon the vendor's inspection results of the damaged relay.

Enclosed are forty copies of this report.

Very truly yours,



Donald A. Ross  
Manager, Nuclear Generating Stations

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cc: Mr. J. P. O'Reilly, Director  
Directorate of Regulatory Operations, Region I