

Jersey Central Power & Light Company



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

May 30, 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
Failure of Liquid Poison Pump, NPO1A

This event is considered to be an abnormal occurrence as defined in the Technical Specifications, Paragraph 1.15.E. Notification of this event as required by the Technical Specifications, Paragraph 6.6.B, was made to AEC Region I, Directorate of Regulatory Operations, on Friday, May 18, 1973.

A functional test, required at refueling outage intervals, was being conducted whereby demineralized water is injected into the reactor vessel using the keylock switch on panel 4F in the Control Room. Upon initiating the "A" Liquid Poison System, the squib valve fired, the pump started, and the Clean-Up System isolated as required. However, after running for approximately 10 seconds and pumping no more than 5 gallons of water into the vessel, the pump stopped. A restart was attempted using the keylock switch and an attempt was made to run the pump using the local start push button, both to no avail.

In troubleshooting the circuit, the logic control power fuse which supplies both the pump and squib firing circuits was found blown. The fuse installed was of 3 ampere capacity; the circuit drawings indicated a 10 ampere fuse should have been installed.

The reason for the blown control power fuse was traced to a low resistance (5 ohms to ground) in each of the already fired squib primer circuits (2 primer circuits per squib). Although each primer circuit is provided with 2 amp fuses, both were found intact. Normally these grounds would not have caused any additional current to be drawn since, by design, the logic circuit is ungrounded. However, when the circuit was initially installed, a ground was provided in the 460 v motor control center for personnel protection. A check was made with the squib valve manufacturer, CONAX, and it was indicated that one could expect either a ground or an open circuit to occur once the primer circuit

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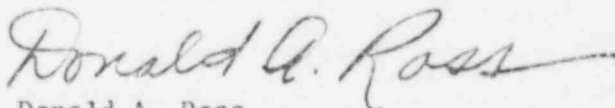
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was fired, with no degree of certainty as to which it would be. The circuit was fused as intended, i.e. a 10 amp control power fuse and 2 amp primer circuit fuses, and the system returned to service. A satisfactory surveillance test of the "A" Liquid Poison System was conducted with the circuit fused as discussed above.

The Liquid Poison System is designed to bring the reactor to a cold shutdown condition from full power at any time in core life independent of the CRD System capabilities. As demonstrated during this functional test, this objective would have been performed by the "B" Liquid Poison System. The safety significance of this event, then, is that the system did not have its designed redundancy.

To prevent the reoccurrence of this type failure, the following action will be taken. Fuse locations will be tagged or identified in some manner so that should future fuse replacement be required, the proper size will be installed. Other safety related circuit fuses will be checked to insure the fuses installed are of the proper design capacity.

Very truly yours,



Donald A. Ross
Manager, Nuclear Generating Stations

DAR:cs

Enclosures (40)

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