

Jersey Central Power & Light Company

50-219

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

March 29, 1973

Mr. Robert J. Schemel, Chief
Operating Reactors Branch #1
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545



Dear Mr. Schemel:

In accordance with your letter dated January 17, 1973, the following information was assembled regarding the corrective action taken to avoid a recurrence of incidences of the nature reported to the AEC on April 20, 1972 and October 6, 1972.

Reactor Building Ventilation System Circuitry Modification

As was reported on April 20, 1972, a Limiting Condition for Operation was violated when a circuit malfunction prevented the reactor building supply dampers from shutting regardless of the operation of the supply fans. It was discovered that this malfunction would occur every time one of the three supply fan circuit breakers was "racked out". This happened because a "racked out" breaker would supply a "fan running" signal to each of the twenty supply damper's logic circuits. Since the three "fan running" signals fed a series OR circuit, one racked out breaker and two deenergized fans would create the logic to allow the dampers to remain open.

On August 29, 1972, a circuit modification was implemented which corrected the above situation. Now a "racked out" fan sends a "fan stopped" signal to a parallel OR circuit. For a supply damper to remain open, it is now necessary for at least one fan to be running.

Liquid Poison Pump Circuitry Modification

The problem with the control circuitry for these pumps is similar to that discussed above. Whenever one pump's breaker was "racked out", the other pump was rendered inoperable. The control circuit has a feature which will not allow both pumps to run simultaneously. Originally, this was implemented by having a normally closed auxiliary switch from the A pump's starter in the B pump's starting circuit (and vice versa). When the A pump was started, the auxiliary switch would open and thereby prevent the B pump from being energized. Because the auxiliary

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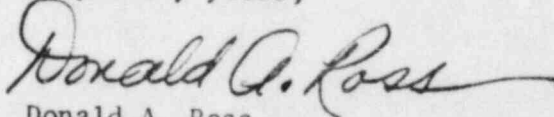
switch was mounted to the circuit breaker frame, its contacts in the standby pump's starting circuit were physically removed when the breaker was racked out. This simulated one pump operating and subsequently locked out the standby pump.

On December 20, 1972, both pump circuits were modified as follows: An interposing relay mounted to the control cabinet was added to each control circuit. These relays are normally deenergized and have normally closed contacts which function as interlocks for the standby pump. The auxiliary switches have been removed from the pump starting circuits and have been changed to normally open contacts which control the interposing relay. When a pump is started, its auxiliary switch closes and causes the interposing relay to energize. This, in turn, opens the contacts in the standby pump's starting circuit and thereby prevents it from starting. If a breaker is racked out, it has no affect on the state of the interposing relay. Therefore, the operability of the standby pump is not affected.

In addition to the above modifications, an investigation was conducted for all Engineered Safeguards Systems which could possibly exhibit failures similar to those discussed above. Specifically, the study concentrated on racking out a breaker of a component and its affects on other redundant components in the system. The study was completed on December 1, 1972 and revealed no additional problem areas.

Regarding your request for a proposed Technical Specification change, we do not feel it to be warranted. The Technical Specifications at present delineate the action to be taken if redundant safeguard system equipment is rendered inoperable. Recently we have issued a Standing Order which requires the testing of a redundant system immediately after its counterpart is rendered inoperable or found to be inoperable. Since these meet the intent of your request, no changes to the Technical Specifications are deemed necessary.

Very truly yours,



Donald A. Ross
Manager, Nuclear Generating Stations

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