

Regulator

File Cy.

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Commonwealth Edison Company

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Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

May 13, 1971

Dr. Peter A. Morris, Director
Division of Reactor Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545



Dear Dr. Morris:

This is to inform you of an occurrence in which a defective motor operator on a Unit #1 Emergency Condenser System Valve was found during investigation into the cause of a 125V DC ground. The failed valve was MO-101, the north emergency condenser condensate valve, which has previously failed three times as reported to you on April 30, September 4 and December 4, 1970.

During the pre-startup checks on the evening of April 13, 1971, the emergency condenser condensate return valves, MO-101 and MO-109, were closed. About one hour after they were closed a 125 V DC ground appeared and was ultimately traced to MO-101.

Inspection of the motor revealed that the insulation had flowed and the windings had low resistance to ground.

The motor was replaced and during testing the motor failed to de-energize when the valve closed. After waiting approximately 20 seconds the operator tripped the breaker manually. The torque switch was reset to a lower value and the valve was operated satisfactorily with the torque-switch de-energizing the motor when the valve closed.

Investigation of the records showed that the torque switch setting had been increased in December, 1969, to reduce leakage through the valve. All failures of the valve have been experienced since that time. It is believed that the high torque setting prevented the motor from tripping as required, thus causing a continuous supply of current to the motor and subsequent overheating of the varnish and insulation on the motor windings.



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May 13, 1971

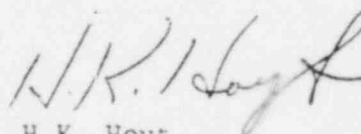
The Station Review Board reviewed the problem and concluded that the high setting of the torque switch was the cause of the failure of MO-101. As corrective action, the motor was replaced and functionally checked before returning it to operation, the torque switches on the valve operator were reset and all packings on the valve were reworked. Additionally, the following program has been implemented to insure the operability of the new motor for the remainder of the operating cycle:

1. Additional insulation has been installed on the valve to reduce operational temperatures.
2. Ventilation has been directed to the motor for additional cooling.
3. A thermocouple has been placed on the motor to monitor operating temperatures, during plant startup.

In addition, MO-109, a similar valve to MO-101 which has not failed, was inspected and appeared normal. A thermocouple was also added to the motor for subsequent temperature monitoring during plant startup.

We feel the present corrective action undertaken has resolved the problems experienced with MO-101. However, as added assurance, we are still planning to relocate both valve operators outside of the area during the 1971 P-fueling Outage so that the motors will be accessible during operation, and in a cooler location.

Sincerely,



H. K. Hoyt
Superintendent

HKH:glt