



Regulatory

File Cy.

50-249

# Commonwealth Edison Company

ONE FIRST NATIONAL PLAZA ★ CHICAGO, ILLINOIS

Address Reply to:

POST OFFICE BOX 767 ★ CHICAGO, ILLINOIS 60690

Dresden Nuclear Power Station  
R. R. #1  
Morris, Illinois 60450  
July 14, 1971



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

Subject: License DPR-25, Dresden Nuclear Power Station Unit #3  
Sections 6.6.A.1 and 6.6.B.2 of the Technical Specifications

Dear Dr. Morris:

This is to report a condition relating to the operation of the Station in which, on July 4, 1971, the Unit #3 High Pressure Coolant Injection (HPCI) System auto-isolation signal failed to reset during functional testing of the system with reactor pressure greater than 100 psig. The failure of the isolation to reset rendered the system incapable of providing coolant injection as required by Section 3.5.C.1 of the Dresden Unit #3 Technical Specifications.

### Problem and Investigation

During initial plant startup testing, reactor pressure was being increased to the 150 psig test point for hot functional testing of, among other plant components, the HPCI System. As reactor pressure was increased above 100 psig, an attempt was made to open the HPCI steam isolation valve 2301-5 in preparations for HPCI turbine warming. The valve remained isolated and would not open, thus rendering the HPCI inoperable as required by the Technical Specifications. Insertion of control rods was immediately initiated to reduce pressure below 90 psi to allow evaluation of the condition with the HPCI System not required to be operable.

July 14, 1971

Investigation of the HPCI logic system revealed the 1-2 contacts on relay 2330-125A were incorrectly wired as "b" contacts (contacts closed with the relay de-energized) instead of "a" contacts (contacts open with the relay de-energized), thus blocking the "open" logic for both HPCI steam isolation valves, numbers 2301-4 and 2301-5. Wiring of the contacts in this manner would not have allowed the 100 psig interlock relay, 2330-146AT, to energize. Thus, the system was maintained in an isolated mode and incapable of providing driving steam to the HPCI turbine.

Valves 2301-4 and 2301-5 were last tested during pre-operational tests on October 24, 1970, with a simulated reactor pressure greater than 100 psig. Proper operation of the valves and logic circuitry was verified. Since that time only one modification was made to the logic circuitry in question. This was installed on March 22, 1971, and consisted of an addition of leads to contacts 11 and 12 in relay-125A to provide audible indication of HPCI auto-isolation. Records do not indicate that any additional work was performed at that time to disturb the 1 and 2 contacts or the relay itself, which would have been unnecessary for adding the modification.

#### Conclusion

The cause of the HPCI System auto-isolation above 100 psig was due to miswired contacts in the valve permissive relay. The source of the miswiring can not be identified. The wiring was corrected and the system tested satisfactorily.

Sincerely,

*H. K. Hoyt*  
H. K. Hoyt  
Superintendent

HKH:ls