



Commonwealth Edison  
Quad-Cities Nuclear Power Station  
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50-265

RAP-72-199

November 3, 1972



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

Reference: Quad-Cities Nuclear Power Station Unit 2  
License DPR-30, Appendix A  
Sections 1.0.A.2, 3.5.C, and 6.6.B.3

Dear Mr. Giambusso:

The purpose of this letter is to inform you of the details regarding an incident involving the HPCI System at Quad-Cities Unit 2. This abnormal occurrence was reported to you by telegram on October 21, 1972.

#### DESCRIPTION OF INCIDENT

At 1855 on October 20, 1972, with the Unit 2 reactor at 45 per cent power, the HPCI System was to be run in conjunction with a special test designed to monitor torus pressure waves and displacement during an electromechanical relief valve actuation and HPCI operation. The HPCI turbine stop valve would not open, however, and the system was declared inoperable. Additional surveillance required by the Technical Specifications was conducted.

The unit was to be shutdown on October 21, for maintenance. The investigation into the stop valve problem was later complicated by a 250 Vdc ground and the failure of steam admission valve MO 2-2301-3.

#### INVESTIGATIONS

On the evening of October 20, an inspection of the turbine stop valve trip and reset mechanism was made. The valve was capable of being reset locally, but it could not be held open. The problem appeared to be either a sticking

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trip solenoid or defective operating cylinder. Oil pressures were normal and the reset relay, primary piston and secondary operating cylinder were found to be in satisfactory condition.

Additional trouble shooting was to be conducted the next day; however, while the unit was being cooled down, the HPCI turbine operated satisfactorily at 0445 on October 21, 1972. Attempts later in the day to duplicate the problem with the stop valve were unsuccessful.

During these investigations it was observed that numerous alarms were received each time the control switch for the motor operated steam valve to the HPCI turbine, MC 2-2301-3, was put in the CLOSE position.

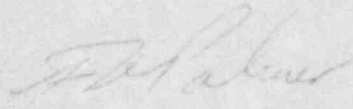
In addition to the unrelated alarms, all of the indicating lights on panel 902-3 blinked. The switch for the 2301-3 valve was put to the close position several times during the day while looking for a ground in the system. Since this valve has a seal-in feature to close the valve and a torque switch to stop closure, each time that the switch was put to the close position the valve motor started and applied a torque to the valve stem until it was tripped by the torque switch. At 1830 on October 21, the valve stem was found to be bent.

#### CORRECTIVE ACTION

The cause of the spurious alarms was traced to a ground on the strip heaters inside the 2A Bus (250 vdc) cabinet. The heaters have been disconnected. A replacement valve stem was obtained from the Dresden Nuclear Power Station and the valve was returned to service at 2225 on October 22, 1972. All operators have been cautioned against attempting to close an already closed valve with a seal-in feature.

very truly yours,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION



F. A. Palmer  
Superintendent

FAP/zm