



- I. LER NUMBER: LER/RO 82-21/03L-0
- II. LICENSEE NAME: Commonwealth Edison Company  
Quad-Cities Nuclear Power Station
- III. FACILITY NAME: Unit Two
- IV. DOCKET NUMBER: 050-265
- V. EVENT DESCRIPTION:

On October 15, 1982, at approximately 0945 hours, the Unit Two Reactor Operator found that the alarm "Turbine Pressure Generator Load Reject and Stop Valve Scram Bypass" would not clear. At that time, the Reactor power was at 86 percent of rated and was being increased following a Maintenance Outage. The alarm should clear at a Reactor power greater than approximately 40 percent of rated. An inspection of panel 902-17 revealed that relay 2-590-123B was closed, while the associated relays in the Reactor Protection System circuit 2-590-123A, C, and D were all open, as they should have been. The relays open on a pressure switch signal which actuates when Turbine first stage pressure is greater than 45 percent of rated. Since the relays serve to bypass the Generator Load Reject and Stop Valve Closure scrams (one-out-of-two-twice logic, one bypass relay for each subchannel), having relay 2-590-123B closed effectively disabled subchannel B1. This is contrary to Technical Specification Table 3.1-3 which states that two subchannels per trip system must be operable. During this investigation, preparations were made to pull the solenoid fuse on the bypass relay; thereby placing the B1 subchannel in the tripped condition. Before this could be accomplished, however, an Instrument Maintenance Foreman found the Rack Stop Valve for pressure switch PS 2-504B in the closed position. Approximately 15 minutes after this occurrence was discovered, the stop valve was opened causing the bypass relay to open. Thus, making the B1 trip subchannel operable.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

The Generator Load Reject and Stop Valve Closure Scram functions were always operable. Only the redundancy of the trip logic was compromised by having the B1 subchannel inoperable. The remaining B2 and A1 or A2 subchannels were sufficient to cause a Reactor trip had the need arisen. Therefore, this occurrence had no affect on safe operation of the plant.

VII. CAUSE:

The B1 subchannel bypass relay failed to open at 45 percent of rated first stage Turbine pressure because the associated pressure switch was inadvertently left valved out. During the Maintenance Outage that took place between October 8 and October 13, 1982, the test taps for these pressure switches were replaced. The Instrument Isolation Valve for PS 2-504B leaked sufficiently to require the Rack Stop Valve, which is located behind the instrument rack, to be closed. When the Instrument Mechanic finished replacing the test tap, he opened the Instrument Isolation Valve, but failed to open the Rack Stop Valve. Therefore, the designated cause for this occurrence is personnel error.

VIII. CORRECTIVE ACTION:

The Instrument Mechanics have been reminded as to the possible consequences of not returning equipment to its original state following the completion of maintenance work or surveillances. They have also been reminded to recheck all of their work upon its completion. This is considered an isolated situation, since it would not normally be necessary to close the second isolation valve while doing work of this type. However, to prevent a similar occurrence of this nature, all future isolations utilizing the Rack Stop Valve will be removed from service through the Shift Engineer and Company approved procedure.

This occurrence will be discussed during the weekly Operations Department meeting as to the importance of verifying that the "Turbine Pressure Generator Load Reject and Stop Valve Scram Bypass" alarm can be cleared shortly after 40 percent power is obtained. In addition, a sign-off space has been added to the step of Unit Startup procedure QGP 1-1, which requires the above verification.