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# Commonwealth Edison Company

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

WPW Ltr. #218-73

March 23, 1973



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

SUBJECT: LICENSE DPR-19, DRESDEN NUCLEAR POWER STATION, UNIT #2,  
SECTION 6.6.c.1 of THE TECHNICAL SPECIFICATIONS.

Dear Mr. Giambusso:

This is to report a condition relating to the operation of the unit, in which, on February 22, 1973, during valve operability checks for the monthly unit 2/3 diesel generator outage, low pressure coolant injection (LPCI) valve MO-2-1501-32A was cycled closed, but tripped immediately when the control switch was placed in the "open" position.

## PROBLEM AND INVESTIGATION

On February 22, 1973, at 1800, the unit 2 reactor was at 735 MWe, 2238 MWt with reactor pressure at 1000 psig and reactor water level at 30 inches. The reactor mode switch was in the run position. Surveillance testing was in progress.

At 1815, LPCI valve MO-2-1501-32A (LPCI system cross tie valve, P & ID M-29) was closed during surveillance testing. An attempt was then made to open the valve. However, when the control switch for the valve was placed in the "open" position, the breaker tripped.

This valve had been cycled successfully during routine surveillance on February 20, 1973. This is the first failure on this particular valve. However, similar problems have been experienced on other valves at the site.

The investigation revealed the torque switch settings to be 2 3/4 for opening torque and 2 1/2 for closing torque. The torque settings were changed to 3 and 1 1/2 respectively. The thermal overloads and breaker trip settings were checked and found to be within acceptable limits.

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The cause of the breaker trips is believed to be in the design of a circuit breaker. It is postulated that, when power is applied to the load device the magnetic trip levers contact the trip bar with sufficient force to partially disengage the trip mechanism. This action is repeated each time the load device is energized. The result of this action is that the circuit breaker opens at a much lower current than its design trip setting.

The LPCI system cross tie valves, 1501-32A and B, are normal locked open valves which are cycled during surveillance testing. The cross tie valves allow discharge to either reactor recirculation loop in the event of LPCI initiation. The failure of valve 1501-32A would have reduced the capacity of the LPCI system during the short time the valve was inoperative. However, both core spray subsystems, the containment cooling subsystem and the diesel generators were operative.

#### CORRECTIVE ACTION

As a precaution, the torque settings on valve 1501-32A were changed from 2 3/4 opening and 2 1/2 closing to 3 and 1 1/2, which is in agreement with the motor operator vendor recommendations. The possible high current resulting from the incorrect torque switch settings could have hastened the breaker malfunction. The torque switches on similar safety system valves will be checked for proper settings.

A sample breaker has been sent to the manufacturer for further investigation of the apparent design problem. The results of the breaker analysis will dictate additional corrective action.

*W. P. Worden*  
W. P. Worden  
Superintendent

WPW:CES:jw

cc: WPW Ltr. File