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Commonwealth Edison Company

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

March 23, 1973

WPW Ltr. #217-73



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

SUBJECT: LICENSE DPR-10, 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 23, 1973, during surveillance testing, the low pressure coolant injection (LPCI) containment cooling heat exchanger service water outlet valve failed to open.

PROBLEM AND INVESTIGATION

On February 23, 1973, at 0030 hours while conducting surveillance tests, the containment cooling service water outlet valve, 1501-3A, would not open.

The containment cooling heat exchanger service water outlet valve is normally closed when both service water pumps are shutdown. The valve is throttled automatically to maintain the service water pressure 20 psig above LPCI system pressure whenever a service water pump is running. The valve throttling is controlled by a position modulator which receives inputs from a differential pressure transmitter and valve position sensor. The position modulator compares the differential pressure signal with the valve position signal and actuates a relay in the valve opening and closing control circuit to maintain 20 psig differential pressure.

The valve position signal is generated by a slide wire assembly located on the valve. The center tap of the slide wire is rotated by a geared shaft on the valve operator. The slide wire assembly is held in a position by a lock nut securing it to a mounting bracket.

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The investigation revealed the lock nut securing the slide wire assembly had come loose allowing the entire assembly to rotate rather than only the center tap. As a result of this, a faulty signal was input to the position modulator which called for the 1501-3A valve to remain in the closed position.

The loosening of the lock nut is believed to be caused by over-travel of the slide wire center tap which exerts a torque on the entire assembly resulting in loosening of the lock nut and eventual faulty valve position signal. A similar problem has been experienced with this and other slide wire assemblies on the containment cooling service water pressure control systems.

The failure of the containment cooling heat exchanger service water outlet valve would have slightly reduced the cooling capacity of the system; however, the valve was manually operable and the required backup systems were tested.

CORRECTIVE ACTION

The slide wire assembly was adjusted and the lock nut tightened. We are evaluating modifications to the slide wire assembly which might minimize the potential for recurrence of this type of failure. We expect to have our evaluation completed by June 1, 1973, and will make changes as dictated by that evaluation. Additionally, the slide wire assembly will be checked on valve 1501-3B on Unit 2, and valves 1501-3A and 3B on Unit 3, for tightness.

W. P. Worden
W. P. Worden
Superintendent

WPW:CES:jw

cc: WPW Ltr. File