



Commonwealth Edison
Quad-Cities Generating Station
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NJK-74-5

March 19, 1974

Mr. John F. O'Leary, Director
Directorate of Licensing
Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Reference: Quad-Cities Nuclear Power Station, Unit 1
Docket No. 254, DPR-29, Appendix A,
Section 1.0.A.2 and 3.5.E.

Dear Mr. O'Leary:

The purpose of this letter is to inform you of the details of an occurrence that took place on March 10, 1974 while performing the monthly surveillance checks on the Reactor Core Isolation Cooling System (RCIC). The motor operator would not operate turbine steam inlet valve MO 1-1301-61 so the system was declared inoperable. This abnormal occurrence was reported to you by telegram on March 11, 1974 and discussed with Region III, Directorate of Regulatory Operations on March 11, 1974 by telephone.

PROBLEM AND INVESTIGATION

When it was discovered that the turbine steam inlet valve on the RCIC system would not open, the power supply breaker was checked and found to be operating properly. The valve was operable in the manual mode, but since the system requires automatic operation it was declared inoperable. The High Pressure Coolant Injection System (HPCI) was satisfactorily tested immediately in accordance with Technical Specification 4.5.E.2.

Electrical maintenance then determined that the motor on the valve operator was running but not causing the valve to move. Further investigation revealed that there was sufficient wear on the manual declutch cam and on the trip lever which causes the worm gear to engage to make it fail to operate. When the declutch lever was operated, the cam on the declutch lever

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shaft did not move the trip lever enough to cause the worm gear to engage. Therefore, when the motor operated it was not engaging the worm gear and closing the valve.

EVALUATION AND CORRECTIVE ACTION

A means of supplying makeup water to the reactor in the event of an isolation with a failure of the feedwater system was not jeopardized since the HPCI system is the designated alternate makeup water system and was proven operable. Additionally, the failed RCIC valve could have been operated manually if needed.

The cam and trip lever were built up with weld because spare parts were not immediately available. The operator functions properly now; new parts have been ordered and will be installed as soon as they become available.

CAUSE

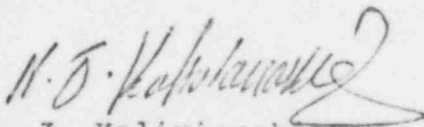
The cause of this failure was excessive wear during valve operations causing the cam and trip lever to become inoperable.

CUMULATIVE EXPERIENCE

There have been no previous failures of this type on a Limit-Torque valve operator at Quad-Cities Station. It is felt that our monthly operability surveillance is adequate to detect this type of failure. If further failures of this type are experienced, our surveillance in this area will be increased.

Very truly yours,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION


N. J. Kalivianakis
Station Superintendent

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cc: Region III, Directorate of Regulatory Operations