

- I. LER Number LER/RO 79-20/03L-0
- II. LICENSEE NAME COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION
- III. FACILITY NAME UNIT ONE
- IV. DOCKET NUMBER 050-254
- V. EVENT DESCRIPTION

On May 25, 1979, during a Unit One condenser maintenance outage, the quarterly MSIV closure timing surveillance (QOS 250-4) was performed. While performing the test, main steam isolation valve (MSIV) A0-1-203-2C closed in 6 seconds. This time exceeds the maximum closure time of 5 seconds for any MSIV as stated in Technical Specification Table 3.7-1. The seven remaining MSIVs were tested satisfactorily. The 2C MSIV will be retimed prior to unit Startup.

There have been two similar occurrences in which a MSIV failed to close in less than 5 seconds; the most recent of which is reported in LER/RO 50-254/77-6.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE

The main steam isolation valves are required to close in less than five seconds to prevent fuel rod rupture in the event of a steam line break outside the containment. The 2C valve is the outboard primary containment isolation valve in the "C" steam line. The 1C inboard valve closed in 4.9 seconds, which is within the required closure time. The inboard MSIV would have performed as designed to isolate the steam line in less than 5 seconds. Since the redundant valve was operating properly, safe reactor operation was not affected as a result of this occurrence.

VII. CAUSE

The cause of this occurrence is designated as equipment failure. The speed control valve adjustment on the hydraulic control cylinder had varied, thus slowing down the valve travel time. The control valve is a needle valve that regulates the speed of the hydraulic oil flowing from the bottom to the top of the piston. The piston is attached to the stem of the MSIV to regulate the travel speed of the valve stem.

The speed control unit is manufactured by Flick-Reedy Corp., Drawing No. File 4536.

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VIII. CORRECTIVE ACTION

The speed control valve was adjusted to speed up the valve closure time. The valve was exercised three times and closed in 3.8 seconds. This corrective action was deemed adequate to prevent reoccurrence.

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