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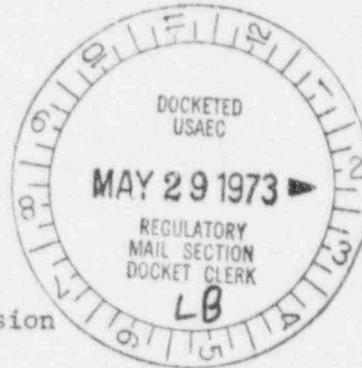
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**NORTHERN STATES POWER COMPANY**

MINNEAPOLIS, MINNESOTA 55401

May 25, 1973

Mr. J F O'Leary, Director  
Directorate of Licensing  
United States Atomic Energy Commission  
Washington, D C 20545



Dear Mr. O'Leary:

MONTICELLO NUCLEAR GENERATING PLANT  
Docket No. 50-263 License No. DPR-22

**Inoperability of a Primary Containment Valve T-Ring Seal**

A condition occurred at the Monticello Nuclear Generating Plant which we are reporting to your office in accordance with Section 6.7.B.1, Abnormal Occurrence Reports, of the Technical Specifications, of the Provisional Operating License DPR-22.

On May 17, 1973, during the performance of an external inspection of the suppression chamber, the T-ring on an air operated reactor building-to-suppression chamber vacuum breaker valve (AO 2379) was found depressurized. This valve is of a butterfly type design with an inflatable resilient seal for positive valve disc seating. When the valve is in the closed position, an actuating arm attached to the valve shaft opens a seal pilot valve allowing air pressure to the seal. Examination of the valve on May 17, revealed interference between a bolt on the operator linkage and a bolt on the operator support. This interference prevented full valve travel in the close direction and consequently, prevented actuation of the seal pilot valve and inflation of the T-ring seal.

The interference was caused by movement of the actuator arm on the valve shaft resulting in a misalignment of the valve operator linkage. The set screw used to position the actuator arm on the valve shaft was found loose. The valve had been disassembled during the recent refueling outage for inspection and replacement of the T-ring seals; however, the operator linkage was uncoupled above the actuator arm and the entire valve and actuator arm assembly was removed as a unit. During the process of handling the valve with the loose set screw, the actuator arm moved on the shaft sufficiently to result

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in the interference between the operator linkage bolt and the operator support bolt. The interference was eliminated by repositioning the actuator arm. Additional clearance between the bolts was provided by reversing the operator support bolt to place the bolt head on the inside of the support plate.

Functional testing of the valve following the repairs demonstrated free operation of the valve to the fully closed position and proper inflation of the T-ring seal.

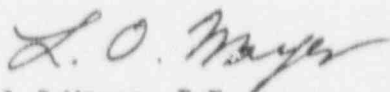
A subsequent investigation of all drywell and suppression chamber vent and purge valves of a design similar to that of AO 2379, revealed free operation of these valves with proper inflation of the T-ring seals. The operator actuator arms on these valves were verified to be securely fastened to the valve shaft. The operator mounting arrangements for these valves are different from that of AO 2379 and are not susceptible to the same interference problem.

This occurrence did not affect safe operation since:

1. Primary Containment isolation capability was provided by the check valve downstream of AO 2379.
2. Since AO 2379 was free to operate in the open direction, vacuum relief capability between the reactor building and the suppression chamber was not affected.

One previous T-ring seal inflation malfunction has occurred at Monticello. As a result of this previous problem, a verification of T-ring pressure on all drywell, torus vent and purge valves was included in the monthly external torus inspection procedure. Since the present problem was discovered during the performance of this inspection, it is felt that the inspection is adequately serving its intended function of assuring T-ring pressurization.

Yours very truly,



L O Mayer, P.E.  
Director of Nuclear Support Services

LOM/br

cc: B H Grier  
G Charnoff  
Minnesota Pollution Control Agency  
Attn. Ken Dzigan