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Regulatory File Cy.

BBS Ltr. #394-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
June 25, 1975

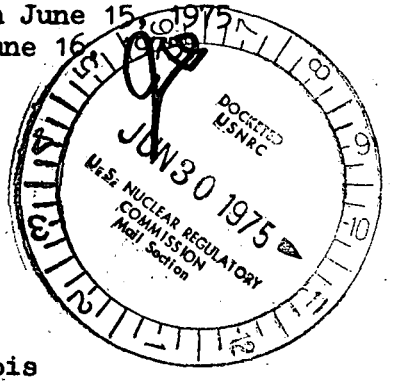
Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operation-Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS
FAILURE OF VALVE MO-2-1301-2 TO OPERATE

References: 1) Regulatory Guide 1.16 Rev. 1 Appendix A

2) Notification of Region III of U. S. Nuclear Regulatory Commission
Telephone: Phil Johnson, 1355 hours on June 15, 1975
Telegram: J. Keppler, 1102 hours on June 16, 1975

3) Drawing Number 12E2507A



Report Number: 50-237/75-38

Report Date: June 25, 1975

Occurrence Date: June 15, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

At 0800 hours on June 15, 1975, isolation condensor outboard steam supply valve MO-2-1301-2 was found to have a bent stem.

CONDITIONS PRIOR TO OCCURRENCE

Unit-2 was in the shutdown mode during a weekend maintenance outage. The instrument mechanics were performing the high flow isolation valve surveillance test which causes valve 1301-2 to close.

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DESCRIPTION OF OCCURRENCE

Following a work request for a tripped circuit breaker, the electrical maintenance department made an inspection of valve 1301-2. During testing of the breaker and Limitorque operator, the valve was found to have a bent stem.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Equipment Failure)

No definite cause has been determined at this time; however, two problems apparently contributed to the occurrence:

1) Excessive cycling of valve 1301-2 during maintenance and surveillance testing of the high flow isolation ΔP switches caused the breaker to trip thermally. The control room operator inadvertently placed the control switch in the "auto" position instead of the closed position specified in the surveillance procedure. The "auto" position allowed the valve to cycle each time the ΔP switches were tripped.

2) A possible maladjustment of the limit switches for valve travel may have allowed the valve's torque switch to be bypassed, causing the valve to close with excessive force and bending the stem.

ANALYSIS OF OCCURRENCE

Since Unit-2 was in the shutdown mode with pressure under 90 psig, the isolation condensor was not required to be operable. The outboard valve 1301-2 was in the closed position (isolated) and was capable of isolating the inboard valve 1301-1 if isolation had been required. Plant personnel and the public were not jeopardized by this occurrence.

CORRECTIVE ACTION

The immediate corrective action was to submit a work request for inspection of the valve and breaker. The electrical maintenance department had the valve taken out of service for disassembly and replacement of the stem. The Limitorque drive nut and the valve stem threads were worn significantly; consequently, a valve stem and Limitorque operator from the Unit-3 1301-2 valve were installed.

The limit and torque switches were inspected for damage and found to be in good condition; however, the initial limit switch settings were not checked before disassembly.

After assembly, the valve was successfully cycled three times, both locally and from the control room. All aspects of the control circuitry performed as designed. The valve was also successfully leak-rate tested before being placed back in service.

The control room operators have been cautioned to place valves in the closed position, as specified in the surveillance procedure, to avoid valve cycling during testing.

The Limitorque operator for valve 1301-2 will be dismantled and inspected to help determine the exact cause of the occurrence. A follow-up letter will be submitted if any information pertinent to the cause of failure is discovered.

The importance of proper torque and limit switch settings on Limitorque operators will be re-emphasized to the electrical maintenance personnel prior to scheduled maintenance of the valve operators.

FAILURE DATA

Valve 1301-2 is a 14" gate valve manufactured by the Crane Company. The Limitorque valve operator, model no. SMB-3, is manufactured by the Philadelphia Gear Company.

No similar failure has ever occurred on these valves.

B. B. Stephenson
Superintendent

BBS:JSK:smp

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