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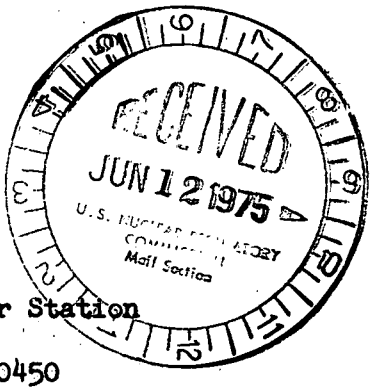
Regulatory Docket File



BBS Ltr. #354-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
June 6, 1975

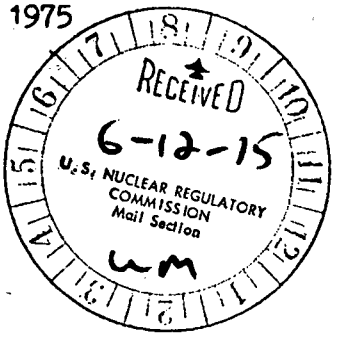
Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operation-Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS
3B CCSW VALVE FAILED TO OPERATE

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

2) Notification of Region III of U. S. Nuclear Regulatory Commission
Telephone: P. Johnson, 1330 hours on May 29, 1975
Telegram: J. Keppler, 1520 hours on May 29, 1975

3) Drawing Number M-29



Report Number: 50-237/75-34

Report Date: June 6, 1975

Occurrence Date: May 29, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

Containment cooling service water valve 1501-3B failed to operate.

CONDITIONS PRIOR TO OCCURRENCE

Unit-2 was at a steady-state power level of 1347 MWt and 416 MWe.

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DESCRIPTION OF OCCURRENCE

On May 29, 1975 at 0200 hours, the containment cooling service water pumps were started to verify operability of the system in order to take the Unit-2 diesel generator out of service for maintenance. The operator noticed that the flow rate through the "B" system valve had increased to approximately 4700 gpm. He attempted unsuccessfully to regulate the flow using the controller.

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The controller indicated that the valve was fully closed; however, system flow showed the valve to be open. An operator was immediately dispatched to the area where he found the valve's Limitorque motor operating. The valve stem appeared to be bent, and the operator subsequently removed the valve breaker from service.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Component Failure)

The control valve failed to operate because the bent stem precluded movement within the valve.

ANALYSIS OF OCCURRENCE

The 3/4" stem apparently cannot exert sufficient force to trip the motor operator's torque switch, causing the Limitorque to operate until the stem is distorted sufficiently to disengage.

Sufficient flow was available to adequately cool the LPCI system through the "A" CCSW system in the event of a loss of coolant accident. Although it was no longer possible to maintain a 20 psig differential between the CCSW and LPCI systems, this deficiency would have been significant only in the event of substantial tube leaks in the LPCI heat exchanger. Since the heat exchanger itself may be manually isolated, diverting LPCI flow through the system's bypass, the health and safety of plant personnel and the public were not endangered by this occurrence.

CORRECTIVE ACTION

The immediate corrective actions taken were to rack out the valve motor operator and to verify the operability of back-up systems. The LPCI, Core Spray, "A" CCSW systems and the Unit-2 & 2/3 diesel generators were all verified to be operable.

On June 1, 1975, the 1501-3B CCSW 3/4" valve stem was replaced with a 1" stainless steel stem (reported in letter #322-75). The valve was successfully operated. A new 1" stainless steel stem will be installed on 1501-3A as soon as the system is available for maintenance.

FAILURE DATA

The original valve stems were 3/4" stainless steel. The Limitorque operators are type SMB-0, developing 10,000 lb. of thrust. The valve is a 12"-300 psi USA standard valve assembly manufactured by Copes-Vulcan, a division of Blaw-Knox Co. Previous failures were those occurring on May 6 and May 22, 1975.

B. B. Stephenson
Superintendent

BBS:JSK:smp

File/NRC