



Regulatory

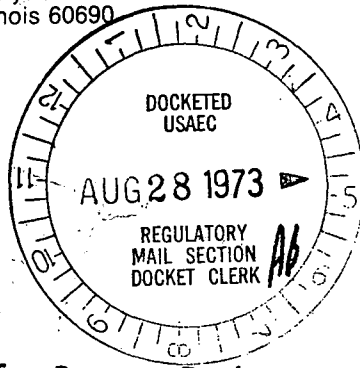
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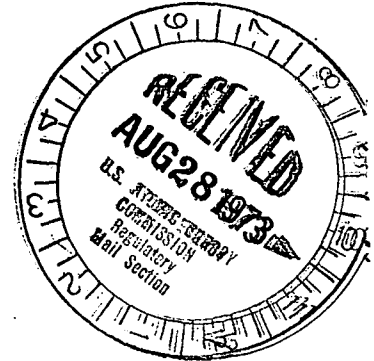
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WPW Ltr. #639-73



Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
August 24, 1973



Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

**SUBJECT: LICENSE DPR-19, DRESDEN NUCLEAR POWER STATION, UNIT #2,
SECTION 6.6.B.2 OF THE TECHNICAL SPECIFICATIONS.
HPCI MOTOR OPERATED VALVE FAILURES.**

References: 1) Notification of Region III of AEC Regulatory Operations
Telephone: F. Maura, 11:45 a.m. on August 16, 1973
Telegram : B. Grier, on August 16, 1973

2) P & ID M-51

Dear Mr. Giambusso:

This letter is to report a condition relating to the operation of the unit at 1500 hours on August 15, 1973. At this time, two HPCI motor operated valves failed to close when given a close signal from the control room. This malfunction is contrary to Section 3.5.C of the Technical Specifications which requires that the HPCI subsystem be operable whenever the reactor pressure is greater than 90 psig and irradiated fuel is in the reactor vessel.

PROBLEM

During performance of the monthly HPCI valve and pump operability check, two HPCI valves failed to close when given a closed signal from the control room. The failure of the 2-2301-6 (HPCI pump suction from condensate storage tank) and 2-2301-1 (HPCI pump minimum flow) valves allowed the torus level to increase and exceed the allowable water volume by 1400 cubic feet. At the time the deviation occurred, thermal power was 1800 MWt, and reactor pressure was 980 psig. The mode switch was in "Run" and the unit was operating at a steady load of 610 MWe.

The immediate cause of the problem appeared to be a failure of the 250 volt D.C. breakers for both valves. The manufacturer of both breakers is Cutler-Hammer.

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The immediate action taken to correct the problem was to manually close both valves and investigate the breakers. The breakers of both valves were repaired within one hour and the torus level was pumped down to satisfactory Technical Specification limits (3.7.A.1) by 1700 hours on August 15, 1973. The HPCI system was returned to service on August 16, 1973 at approximately 2015 hours.

INVESTIGATION

An investigation revealed that the lower electrical interlock operating bar on both auxiliary interlock relays had bent out of their correct shape. The lower electrical interlock operating bar is normally curved to permit the operating roller to traverse the entire curve and operate the auxiliary contacts. The operating bar of both relays was found to have had a greater bend than normal, which prevented the roller from actuating the auxiliary contacts.

CORRECTIVE ACTION

To immediately correct the problem and to return the two valves to operating status, the interlock operating bars were bent to the correct position. In addition, action will be taken to inspect all Unit 2 & 3 D.C. valve breakers to verify that this problem does not exist on other systems.

Throughout the inspection, information will be compiled to aid in determining the probable cause of the disfiguration of the operating bars.

SAFETY EVALUATION

During the period that the 2301-6 and 2301-14 valves were open, the safety of the plant and public were not in jeopardy. The failure of the 2301-6 valve to close during an accident would have injected water from the condensate storage tank into the system. This is the normal suction for the HPCI system during an accident condition. Therefore, although the valve failed, it failed in the safe direction.

The failure of the 2301-14 valve may have reduced flow (of the HPCI system) to the reactor since the line to the torus would remain open. All other Emergency Core Cooling System (ECCS) were operable during this time, and therefore, the continued safe operation of the plant was assured.

Sincerely,

W.P. Worden

W. P. Worden
Superintendent

WPW:do
cc: File/AEC Corr.

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