



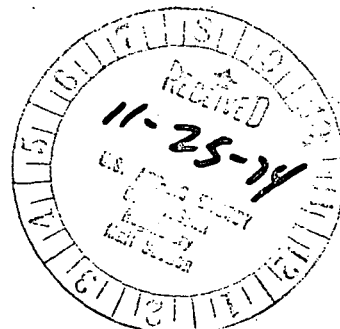
Commonwealth Edison  
 One First National Plaza Chicago, Illinois  
 Address Reply to: Post Office Box 767  
 Chicago, Illinois 60690

EBS Ltr.#843-74

Dresden Nuclear Power Station  
 R. R. #1  
 Morris, Illinois 60450  
 November 22, 1974

**REGULATORY DOCKET FILE COPY**

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



SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS  
FAILURE OF HPCI VALVE MO-2-2301-6

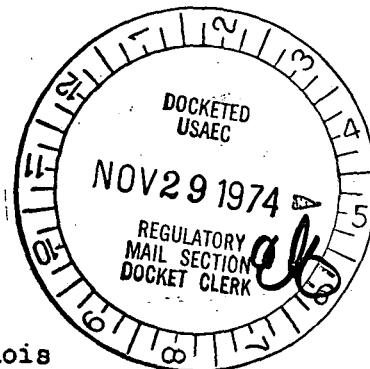
- References: 1) Regulatory Guide 1.16 Rev.1 Appendix A
- 2) Notification of Region III of AEC Regulatory Operations  
 Telephone: Mr. P. Johnson, 1600 hours on November 14, 1974  
 Telegram: Mr. J. Keppler, 0855 hours on November 15, 1974
- 3) Drawing Number: (a) M-51  
 (b) 12E2529  
 (c) 12E2684F

Report Number: 50-237/74-66

Report Date: November 22, 1974

Occurrence Date: November 14, 1974

Facility: Dresden Nuclear Power Station, Morris, Illinois



IDENTIFICATION OF OCCURRENCE

At 1440 hours on November 14, 1974 an unsuccessful attempt to open HPCI valve MO-2-2301-6 was made. This valve is the one that allows the HPCI pump to take a suction from the condensate storage tanks. This occurrence is a condition which could have prevented the performance of the intended safety function of an engineered safety feature system.

CONDITION PRIOR TO OCCURRENCE

Prior to the occurrence, the plant was in the "Refuel" mode. The unit was in the midst of a major refueling outage with "out of core sipping" in progress.

12046

8103060838

DESCRIPTION OF OCCURRENCE

At 1440 hours on November 14, 1974, the Unit #2 reactor operator made an attempt to open HPCI valve MO-2-2301-6. The control switch was set to the open position but no indication was received to indicate the valve had opened.

Immediate investigation conducted by the operating department revealed that the breaker had tripped. Further investigation showed that the motor leads for the shunt field on the terminal block were burned up.

The breaker was immediately racked out of service and an outage placed on the valve (outage number II-1157). A work request was written to make appropriate repairs and a deviation report submitted.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Component Failure)

It appears that a flaw existed in the insulating barrier between terminal posts F1 and F2. At the time of the valve operation, the flaw was of such a geometry as to allow the 250 volts DC to arc across the terminal posts. The arc produced a hole about 1/8 inch diameter in the barrier, burned away the F2 and F1 terminal strips up to the center of the terminal block and, prevented valve operation.

ANALYSIS OF OCCURRENCE

The failure of the valve was of negligible safety significance because reactor conditions (cooled down and depressurized), did not require HPCI system to be in service.

This valve is normally open and is closed during isolated instances when a low water level exists in the condensate storage tanks (HPCI suction then comes from the torus) or during routine valve operability checks.

If MO2-2301-6 could not have been open, the HPCI pump could still have taken a suction from the torus. If the water in the torus would not have been sufficient to bring reactor pressure down, the automatic blowdown system could still have served as a HPCI system backup.

Thus, considering the plant condition at the time of the occurrence and considering the normal mode of operation, it is felt that the occurrence had no detrimental effects or possible detrimental effects to the health and safety of plant personnel or the general public.

CORRECTIVE ACTION

Work request number 10,840 was issued to initiate repairs. Corrective action consisted of installing a new terminal block, inspected prior to

installation to insure absence of insulating defects, and replacing the wires that fed current to the shunt field.


Repairs to the valve were completed on November 15, 1974. The valve was successfully cycled three times at 1640 hours on November 15, 1974. Outage #1157 was cleared and the valve returned to service.

FAILURE DATA

No failure of this type (i.e. terminal strips burning up) has ever been experienced at the station.

The terminal block is manufactured by Cutler-Hammer Inc. It is a 6-pole terminal block without a cover and with screw type connectors. The catalog number is 10987 H5-1.

Sincerely,

  
B. B. Stephenson  
Superintendent

BBS:HJH:do