

CONTROL BLOCK: 1 6

LICENSEE NAME: 01 1 L DR S 2 14
LICENSE NUMBER: 0 0 - 0 0 0 0 0 0 - 0 0 25
LICENSE TYPE: 4 1 1 1 1 1 30
EVENT TYPE: 0 1 31 32

UPDATE

01 CONT 57 58 CATEGORY: T 59 REPORT TYPE: L 60
0 5 0 - 0 2 3 7 68 DOCKET NUMBER
1 1 1 1 3 7 6 69 74 EVENT DATE
0 5 1 3 7 7 75 80 REPORT DATE

EVENT DESCRIPTION

02 During a weekend maintenance outage, HPCI injection valve M02-2301-8 was found to be in
03 the closed position with its valve stem severed. The valve was last observed to
04 function properly during the previous refueling outage. The valve is located in the
05 "X-Area", which is not routinely accessible during operation. From the beginning of
06 this fuel cycle until 10/12/76, the valve was cycled on a monthly basis with proper

(continued)

07 SYSTEM CODE: S F 8 9 10 CAUSE CODE: E 11
COMPONENT CODE: V A L V E X 12 17
PRIME COMPONENT SUPPLIER: N 43
COMPONENT MANUFACTURER: C 6 6 5 44 47
VIOLATION: N 48

CAUSE DESCRIPTION

08 The original Licensee Event Report described the failure of the HPCI M0-2-2301-8
09 valve stem and the immediate corrective action associated with the event. This
10 supplemental report documents the results of tests performed on the damaged valve

(continued)

11 FACILITY STATUS: G 8 9
% POWER: 0 0 0 10 12 13 OTHER STATUS: NA 44
METHOD OF DISCOVERY: C 45 DISCOVERY DESCRIPTION: DC Ground Electrical Inspection 46

12 FORM OF ACTIVITY RELEASED: Z 8 9
CONTENT OF RELEASE: Z 10 AMOUNT OF ACTIVITY: NA 44
LOCATION OF RELEASE: NA 45

PERSONNEL EXPOSURES

13 NUMBER: 0 0 0 8 9 11 TYPE: Z 12 DESCRIPTION: NA 13

PERSONNEL INJURIES

14 NUMBER: 0 0 0 8 9 11 DESCRIPTION: NA 12

OFFSITE CONSEQUENCES

15 NA

LOSS OR DAMAGE TO FACILITY

16 TYPE: Z 8 9 10 DESCRIPTION: NA

PUBLICITY

17 NA

ADDITIONAL FACTORS

18 NA

19 8304050125 770513
PDR ADDCK 05000237
S PDR

NAME: John Wujciga

PHONE: Ext. 265

EVENT DESCRIPTION (continued)

control room position indication. On 10/12/76, valve 2301-8 was taken out of service in the open position (according to position indication) in order to isolate a 250V DC ground which was present only when the valve was closed. The HPCI pump discharge line was then isolated by closing valve 2301-9. This is not a repetitive occurrence. (50-237/1976-66)

CAUSE DESCRIPTION (continued)

stem by Commonwealth Edison's Operational Analysis Department and the final corrective action taken to repair the valve.

Examination of the Dresden Unit 2 HPCI valve stem (MO 2-2301-8) indicates that the failure was not material-related but was a one time mechanical overstress of the stem. Utilizing macro-photographic and electron microscope fractographic techniques, coupled with a chemical analysis of the valve stem, it was determined that approximately sixty (60) percent of the fracture surface separated by the quasi-cleavage mode, and forty (40) percent failed in shear. The shear portion of the fracture is thought to have occurred during bending of the valve stem when the torque switch momentarily remained energized, after the valve seated. Because of moisture accumulation in the valve operator, with 40% of the cross section fractured and the valve stem severely bent, final through-fracture occurred during the next attempted backseat cycle.

During a planned 5 day Unit 2 outage beginning on March 16, 1977, the HPCI MO2-2301-8 valve was disassembled and the failed valve stem was replaced. While the valve was disassembled, a visual code examination of the valve body and internals, including the seating faces, was satisfactorily completed. The examined components were found free of any detectable erosion, corrosion, or mechanical damage. In addition, during the same outage period the junction boxes and conduits in the "X-Area" were sealed to prevent a possible recurrence.

SUPPLEMENT TO DVR

DVR NO.	STA	UNIT.	YEAR	NO.
D -	12	- 2	- 76	- 102

PART 1	TITLE OF EVENT	OCCURRED	
	Failure of 2-2301-8 Valve stem	11/13/76	0930
		DATE	TIME
REASON FOR SUPPLEMENTAL REPORT			
To report results of tests on valve stem and to document final corrective action to repair the valve.			
PART 2			
ACCEPTANCE BY STATION REVIEW	<i>C. E. Sargent</i>	<i>K. Kolmouche</i>	
DATE	5/9/77	5/9/77	
SUPPLEMENTAL REPORT APPROVED AND AUTHORIZED FOR DISTRIBUTION	<i>[Signature]</i>		5/9/77
	STATION SUPERINTENDENT		DATE



Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

BBS Ltr. No. 77-424

May 9, 1977

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

LE FILE COPY

Enclosed please find an update report to Reportable Occurrence report number 50-237/1976-66. This report is being submitted to your office in accordance with the Dresden Nuclear Power Station Technical Specifications, Section 6.6.B.

A handwritten signature in cursive script, appearing to read 'B. B. Stephenson'.

B. B. Stephenson
Station Superintendent
Dresden Nuclear Power Station

BBS:sm

Enclosure

cc: Director of Inspection & Enforcement
Director of Management Information & Program Control
File/NRC