



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

**Regulatory Docket File**

BBS Ltr. #318-75



Dresden Nuclear Power Station  
 R. R. #1  
 Morris, Illinois 60450  
 May 21, 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 DRYWELL EQUIPMENT DRAIN SUMP DISCHARGE VALVE AO-2001-5 FAILURE

- References:
- 1) Regulatory Guide 1.16 Rev. 1 Appendix A
  - 2) Notification of Region III of U. S. Nuclear Regulatory Commission  
 Telephone: Mr. Johnson, 0955 hours on May 14, 1975  
 Telegram: Mr. Keppler, 1115 hours on May 14, 1975
  - 3) Drawing Number: P & ID M-39

Report Number: 50-237/75-24

Report Date: May 21, 1975

Occurrence Date: May 13, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

The drywell equipment drain sump pump discharge valve AO-2001-5 failed to close.

CONDITIONS PRIOR TO OCCURRENCE

At the time of the occurrence, the unit was in a refueling outage with the reactor mode switch in the shutdown position.

DESCRIPTION OF OCCURRENCE

At 1000 hours on May 13, 1975, while performing primary containment isolation valve timing surveillance, the drywell equipment drain sump pump discharge valve AO-2001-5 failed to close as indicated by the valve position indicator

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lights in the control room. The initial operator action was to verify that valve AO-2001-6, which is in series with valve AO-2001-5, was operable and did close when given the signal.

#### DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Unusual Service Conditions)

At 2320 hours on the same day, the maintenance department requested that another attempt be made to cycle valve AO-2001-5 prior to any repairs. The valve was cycled three times without failing. The following morning, the valve was again successfully cycled ten times.

Inspection of the valve showed an excessive amount of metal filings on the solenoid control valve and a section of insulation missing from the electrical conduit leading to the valve. The AO-2001-5 valve is physically located directly underneath penetration X-123. This penetration recently had the bellows replaced. Conduit insulation damage and the accumulation of metal filings apparently occurred at that time. It is believed that a thin film of dirt on the solenoid diaphragms temporarily interfered with normal operation since no electrical problem could be found.

#### ANALYSIS OF OCCURRENCE

Unit -2 was shut down for refueling at the time of the malfunction and primary containment integrity was not required. Had containment integrity been required, valve AO-2001-6 was operable, having a through leakage rate well within Technical Specification limits as demonstrated by a recent local leak rate test. Therefore, the health and safety of the plant personnel and the public were not jeopardized in any way by the incident.

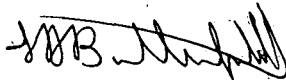
#### CORRECTIVE ACTION

The solenoid control valve was disassembled and cleaned, and the electric conduit insulation was repaired. The valve was again checked for operability and placed back in service at 0300 hours on May 17, 1975.

#### FAILURE DATA

A review of the history of the drywell equipment drain sump pump isolation valves for Units 2 & 3 shows only one similar occurrence. On March 9, 1974 the same valve failed to close completely. This failure was attributed to dirt in the solenoid control valve.

Valve AO-2001-5 is a 3", 150 lb. cast steel gate valve with a 6" diameter cylinder manufactured by Crane Co., catalog number 47 $\frac{1}{2}$  x R.

  
B. B. Stephenson  
Superintendent

BBS:smp

File/NRC