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BBS Ltr. #60-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
January 31, 1975

Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operations-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
FAILURE OF 2B CORE SPRAY PUMP MANUAL DISCHARGE STOP CHECK VALVE

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

2) Notification of Region III of NRC Reg Ops.
Telephone: P. Johnson, 1445 hours on January 23, 1975
Telegram: J. Keppler, 1500 hours on January 23, 1975

3) Drawing Number: M-27

4) Report Number: 50-237/75-1

Report Number: 50-237/75-8

Report Date: January 31, 1975

Occurrence Date: January 23, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

On January 23, 1975 at about 1315 hours, 2 "B" core spray header failed to pressurize. This occurrence represents a condition which if uncorrected could conceivably have prevented or degraded the performance of the intended safety function of an engineered safety feature system.

CONDITIONS PRIOR TO OCCURRENCE

Prior to the loss of core spray header pressure, a pump operability check had just been conducted on the 2B core spray pump. At the time of the

1355

occurrence, the unit was in the REFUEL mode for a refueling outage.

DESCRIPTION OF OCCURRENCE

At about 1315 hours on January 23, 1975, following core spray surveillance test 1400-S-I (Core Spray Pump Operability Check), it was discovered that 2 "B" core spray discharge header failed to pressurize. During normal operation, the ECCS fill pump maintains the core spray system pressure at approximately 80 psig. Following the test, the header pressure would not go above 0 psig.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE

The apparent cause of the loss of 2B core spray header pressure at the time of the occurrence was failure of the discharge stop-check valve (2-1402-8B) to seat properly.

ANALYSIS OF OCCURRENCE

During the loss of the 2 "B" core spray pump discharge header pressure the safety of the plant was not in jeopardy. The 2 "A" system was still operable and filled. Should the 2 "B" pump have been required, it could still have been operated.

CORRECTIVE ACTION

The immediate corrective action taken following the discovery of the problem was to manually cycle valve 2-1402-8B. This seated the stop check valve and allowed the discharge header pressure to return to normal. The pump was then started three times with no check valve problems. The core spray header came up to normal pressure with the fill pump each time.

A similar problem occurred on January 12, 1975 with the same valve (Report number 50-237/75-1). The valve was inspected by station maintenance personnel and the valve manufacturer's representative on January 18, 1975. Other than a minor accumulation of dirt, no anomalies were found. At that time, the valve was cleaned, repacked, and reassembled. A new seal was also installed. After completion of the inspection, the pump was operated and satisfactory operation of the valve verified.

It appears that cleaning did not correct the problem. The next phase of the investigation will be to re-inspect the valve in its "stuck open" position.

The surveillance frequency of the Core Spray Pump Operability will be increased in an attempt to duplicate the condition described in this letter. If it does not recur prior to the end of the present refueling outage plant operation will resume and if the "sticking" problem occurs again, the header will be taken out of service, and, at the most opportune time, the valve re-inspected.

FAILURE DATA

The valve is a 12" Rockwell globe non-return (check) valve.

A similar occurrence happened to the 3-1402-8A valve on August 28, 1974 and, as mentioned above, to the 2-1402-8B valve on January 12, 1975.

for B. B. Stephenson
Superintendent

BBS:HJH:smp

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