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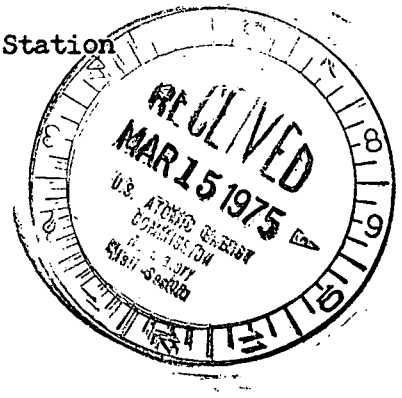
BBS Ltr. #150-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois
March 10, 1975



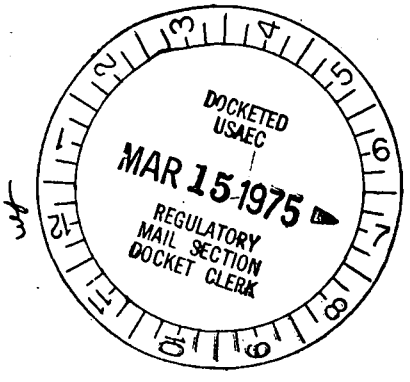
Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operations-Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS
FAILURE OF CORE SPRAY VALVE MO-2-1402-24A TO OPEN

References: 1. Regulatory Guide 1.16 Rev 1

2. Notification of Region III of NRC Regulatory Operations
Telephone: P. Johnson, 1630 hours, March 3, 1975
Telegram: J. Keppler, 1055 hours, March 4, 1975

3. Electrical Prints 12E2430 and 12E2431



Report Number: 50-237/1975-13

Report Date: March 10, 1975

Occurrence Date: February 28, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

On February 28, 1975 at approximately 1900 hours, motor operated valve 2-1402-24A on the core spray system failed to open on a signal from the control room. This was thought to represent a safety system component failure which could, or threaten to, render the system incapable of performing its intended safety function as defined in the technical specification or SAR.

CONDITIONS PRIOR TO OCCURRENCE

Prior to the occurrence, the reactor was locked in the shutdown mode with the replacement of the feedwater sparger and core spray system piping in progress. At this time, all emergency core cooling systems were out of service while the above work was in progress.

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DESCRIPTION OF OCCURRENCE

At 1900 hours on February 28, 1975, Unit 2 was shutdown for its third refueling outage. During the time of the occurrence, the core spray system was being prepared for draining for subsequent removal of the piping.

The injection valves on A and B core spray systems were being placed back in service to allow opening and subsequent draining. "B" Core Spray system valves opened successfully and the line was in the process of being draining. "A" Core Spray system valves, however, did not operate satisfactory. MO-2-1402-24A failed to open on signal from the control room.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE

In reviewing the schematic control diagram of the core spray MO valves, it appears that, with the reactor vessel depressurized, 1402-24A is interlocked with 1402-25A in such a way that it cannot be manually opened from the control room when the 25A valve is open. The interlock, however, does not work in reverse, in that, with 1402-24A open, 1402-25A can also be opened. On "B" system, the operator opened the valves in the 1402-24B and 25B sequence whereas, on "A" system, he opened 1402-25A prior to opening 1402-24A. This resulted in the above occurrence.

At present, the station is unable to verify this conclusion because the valves in question have their motor operators removed.

ANALYSIS OF OCCURRENCE

The occurrence did not jeopardize the safety of the general public, plant personnel nor the plant components. The plant in its present shutdown mode does not require the emergency core cooling systems to be operational. In addition, portions of the core spray system piping were removed prior to this occurrence.

CORRECTIVE ACTION

The immediate action by the operations department was to manually crack the valve off its seat and provide another open signal to the valve. It again failed to open.

Operations, not knowing the nature of the electrical malfunction, proceeded to hold in the contactor at the breaker to open the valve. Subsequent to this action, operations initiated a work request to determine the malfunction.

When the core spray valves have their MO's replaced, a surveillance test will be performed on the subject valves to verify operability.

Any corrective action necessary to be taken to prevent recurrence will be contingent upon the results of the surveillance test and will reported in a followup letter.

FAILURE DATA

To date, two previous occurrences involving the Core Spray system were experienced as follows:

1. February 5, 1971 - Broken limit switch on 2-1402-24B. Corrective action- replaced limit switch.

2. November 27, 1974 - Cracks in base plate for limit switch contacts preventing operation on 3-1402-24A. Corrective Action - replaced base plate damaged by water hammer in core spray line.

The valve operator on the subject valve, 2-1402-24A; Limitorque SMB1, Serial number - 70500A.

The valve body is a Crane model 783U, 10 inch valve with design conditions of 1250 psi at 575°F.

B. B. Stephenson
Superintendent

BBS:RW:smp

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