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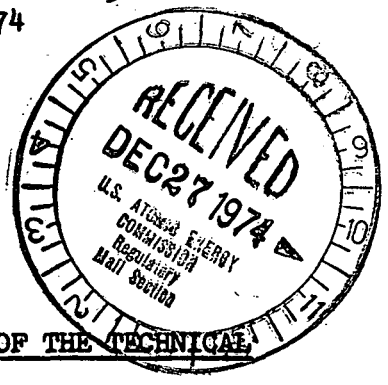
Regulatory File Cy.

BBS LTR. #916-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
December 20, 1974



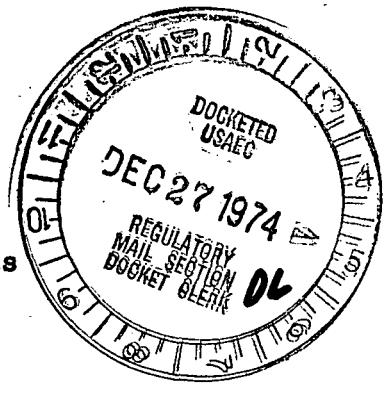
Mr. James G. Keppler, Regional Director
Directorate of Regulatory Operations-Region III
U. S. Atomic Energy Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL SPECIFICATIONS
CRACKED LPCI DRAIN LINE UPSTREAM OF AO-2-1501-25A

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

2) Notification of Region II I of AEC Regulatory
Telephone: Mr. P. Johnson, 1615 hours on December 11, 1974
Telegram: Mr. J. Keppler, 0930 hours on December 12, 1974

3) Drawing Number: M-29



Report Number: 50-237/1974-73

Report Date: December 20, 1974

Occurrence Date: December 10, 1974

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

At about 1430 hours on December 10, 1974, while contractors were installing a new drain pipe, a cracked socket weld (weep) was discovered on the LPCI valve AO-2-1501-25A upstream drain line located in the primary containment. This crack was an abnormal degradation of a primary system boundary designed to contain radioactive materials.

CONDITIONS PRIOR TO OCCURRENCE

Prior to the occurrence, the reactor was locked in the refuel mode. At this time, Unit 2 was into its third refueling outage.

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DESCRIPTION OF OCCURRENCE

While contractors were performing a modification on the LPCI drain line, it was noted that a socket weld was streaming water. As a result of this finding, the station operating engineer was notified.

The initial action was to determine the extent of the leak. The conclusion reached was that the leak, even though it was a degradation of a primary system boundary, was quite small (weep).

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE

The apparent cause of the failure of this weld has been determined to be improper seating of the pipe in the socket. The procedure used in welding the pipe and socket stated that a minimum of approximately 1/16 of an inch shall exist between the pipe end and socket seat prior to welding. The pipe-to-socket joint in its as-found condition did not have the required spacing and, when welded, the normal heat up (expansion) and cool down (contraction) of the primary system eventually stressed the weld which resulted in leakage.

It is unknown when the crack occurred but it was not of sufficient magnitude to have been detected by any increased floor drain sump volume in the primary containment.

ANALYSIS OF OCCURRENCE

Evaluation of the safety implications of the leak found in the LPCI drain line determined that the health and safety of the public was not jeopardized. The leak, upstream of AO-2-1501-25A, could have been isolated, if required, and the loss of water from the reactor would have been prevented.

CORRECTIVE ACTION

The corrective action to be taken to correct this abnormal occurrence will be to grind out the weld and perform the new weld in compliance with welding procedure. At this time, it can only be said that this is a one-of-a kind type occurrence with regard to the LPCI drain lines. Therefore, it is concluded that the corrective action above will prevent a recurrence of this type.

FAILURE DATA

The equipment identification is a 1 inch schedule 80 stainless steel to 3000# 90° socket elbow weld upstream of manual drain valve 2-1501-92A.

A review of station operating history revealed no previous failures of this line. However, failures have occurred in 1 inch vent lines but have been attributed primarily to stress caused by vibration.

Sincerely,

B. B. Stephenson

BBS:smp