

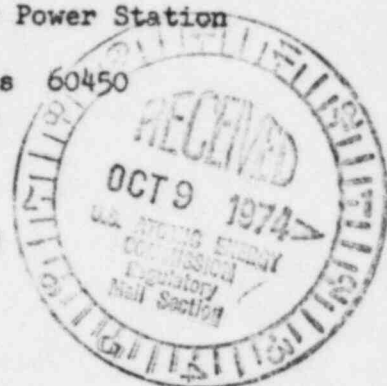


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BBS Ltr.#712-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
October 2, 1974

50-249



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.
THROUGH-WALL CRACK ON TORUS/DRYWELL PURGE LINE, UNIT 3.

- References: 1) Regulatory Guide 1.16 Rev.1 Appendix A
- 2) Notification of Region III of AEC Regulatory Operations
Telephone: Mr. F. Maura, 1100 hours on September 24, 1974
Telegram: Mr. J. Keppler, 1500 hours on September 24, 1974
- 3) Drawing Number: M-356 (S&L)
- 4) Attached copy of NDT Report on Unit 3 Torus/Drywell Purge Line

Report Number: 50-249/1974-29

Report Date: October 2, 1974

Occurrence Date: September 24, 1974

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

Through-wall crack on torus/drywell purge line, Unit 3.

CONDITIONS PRIOR TO OCCURRENCE

Unit 3 was locked in the shutdown mode, with the drywell open for repairs unrelated to this incident, at the time of the occurrence.

DESCRIPTION OF OCCURRENCE

At about 1030 hours on September 24, 1974, a local leak rate test was being conducted on the boundary formed by air-operated valves 1601-21, 1601-22, 1601-55, 1601-56, and 8502-500 on the torus/drywell purge piping. (See Reference 3).

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50-249 incident

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The test involved pressurizing the piping to 50 psig and noting pressure decay. A rapid decay was noted and further investigation revealed a crack in the 18-inch 3-8506 torus/drywell purge line, extending completely through the pipe wall, for approximately 170 degrees of arc around the lower half of the horizontally-mounted pipe, running through the weld joint for a 3/4-inch bushing that served as a flow test line connection. A similar bushing, located on the opposite side (180 degrees around), was plugged and unused. The crack followed almost perfectly the arc joining the two bushings.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Equipment Failure)

The cause of the occurrence is unknown at this time. After investigation of the failed pipe section, a follow-up report on the apparent cause of the occurrence will be issued.

ANALYSIS OF OCCURRENCE

The piping in which the crack was found is a redundant primary containment boundary, since it is isolated from the drywell by the 1601-21 valve, from the torus by the 1601-56 valve, and from the reactor building atmosphere by the 1601-22 valve. All of these valves are normally closed during operation.

In this case, while the reactor was shutdown and the drywell was open, absolutely no danger to plant personnel or to the public existed. Operation with this pipe segment cracked would have posed no immediate danger or threat. However, in the event of a serious accident involving drywell and torus pressurization, the statistical probability of a release into the secondary containment would have been increased due to lack of redundancy in the isolation valve lineup.

CORRECTIVE ACTION

Since the unit was shutdown, no immediate corrective action was required. Nevertheless, repairs were promptly initiated.

A 15-inch-long segment containing the crack was cut out of the line. A new pipe segment was welded in place on September 25, and radiographic tests of the welds were performed on September 26.

In addition, 30 other welds on the same piping (3-8506, 18-inch) were magnetic particle checked and found to be sound. See Reference 4.

On Unit 2, the corresponding piping was visually checked and pressurized with air; no visible or audible leaks were detected.

Mr. James G. Keppler

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October 2, 1974

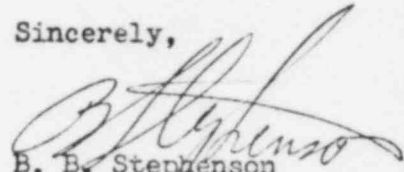
A subsequent magnetic particle check of 34 welds, completed on September 27, produced no indications of cracking. (Three surface indications, which disappeared with filing, were noted).

Further preventive measures are dependent on the results of the analysis to determine the cause of the occurrence.

FAILURE DATA

The 18-inch 3-8506 torus/drywell purge piping is of seamless, A106 Grade B steel of 3/8-inch wall thickness.

Sincerely,



B. B. Stephenson
Superintendent

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