

TO: F. A. DREHER, HQ-E/W
FROM: ROBERT T. CARLSON, RO:1

9/19/74

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(Original document not legible for transmitting via facsimile.)

TO: ZOOQH MEMO - BWR SERVICES - DOMESTIC

CC: G. J. STATHAKIS
J. D. SELBY
A. P. BRAY

SUBJECT: RECIRCULATION LOOP

ON FRIDAY, SEPTEMBER 13, 1974 THE DRESDEN 2 PLANT SHUTDOWN TO INVESTIGATE THE SOURCE OF A 5 CPM UNIDENTIFIED LEAK IN THE DRYWELL. THIS LEAK WAS DETECTED BY THE INSTALLED SUMP MONITORING SYSTEM. A SMALL CRACK THROUGH THE PIPE WALL (HEAT EFFECTED ZONE) WAS DISCOVERED IN THE FOUR INCH BYPASS LINE ON THE B-RECIRCULATION LOOP. THE CRACK WAS CIRCUMFERENTIAL AND LOCATED NEAR THE WELDOLLET ATTACHMENT TO THE MAIN RECIRCULATION PIPE. THE DAMAGED SECTION OF PIPE WAS REMOVED FOR METALLURGICAL EXAMINATION AND A NEW SECTION OF OPIE (PIPE) WAS INSTALLED TO RESTORE THE LINE TO SERVICE.

THE BYPASS LINE IN THE OTHER LOOP WAS EXAMINED AND A SIMILAR CRACK OBSERVED. SEVERAL METHODS OF ACCOMPLISHING AN IMMEDIATE REPAIR ARE CURRENTLY BEING EXPLORED.

GE IS ACTIVELY INVESTIGATING THIS PROBLEM AND WHETHER IT IS LIKELY TO AFFECT OTHER PLANTS OF SIMILAR DESIGN. THE AEC MAY ISSUE A BULLETIN REQUESTING OPERATORS TO EXAMINE THESE LINES IF THEIR PLANT IS SHUT DOWN, OR IF THE PLANT OPERATING TO CONSIDER A SHUTDOWN WITHIN 90 DAYS. WE WILL HAVE MORE DEFINITE CONCLUSIONS REGARDING THE POSSIBLE CAUSE OF THESE CRACKS AND THE APPLICABILITY TO YOUR PLANT AS SOON AS POSSIBLE. GE WILL FURNISH YOU WITH AN UPDATED STATUS ON THIS PROBLEM NEXT WEEK.

/s/ N. L. FELMUS, MGR.
OPERATING PLANT SERVICES

(Handwritten) - Sent 4:50
9/16

(Handwritten) - Dick -

Please discuss

look at Millstone

Loops.

(Handwritten) - (Welds to pipe)
(" " valve)

8305190532 741216
PDR ADOCK 05000237
S PDR

50-237 inquiry



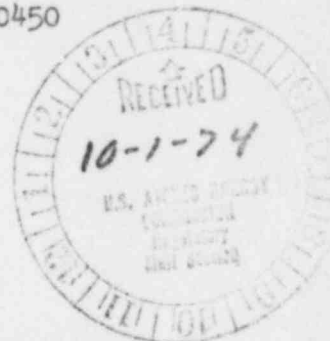
Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

BES Ltr.#680-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
September 19, 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

50-237



SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.B OF THE TECHNICAL SPECIFICATIONS.
PRIMARY SYSTEM LEAKS.

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

- 2) Notification of Region III of AEC Regulatory Operations
Telephone: Mr. F. Maura, 1515 hours on September 13, 1974
Telegram: Mr. J. Keppler, 1543 hours on September 13, 1974

- 3) Drawing Number: P&ID M-26

Report Number: 50-237/1974 M-26

Report Date: September 19, 1974

Occurrence Date: September 13, 1974

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

On September 13, 1974, a leak was discovered on line 2-0203B-4"-A in the "B" recirc. system. The next day a leak was discovered on line 2-0203A-4"-A in the "A" recirc. system. This represents an abnormal degradation of a boundary designed to contain radioactive materials.

CONDITIONS PRIOR TO OCCURRENCE

At 1000 hours on September 13, 1974, Unit 2 was in shutdown.

DESCRIPTION OF OCCURRENCE

At 1000 hours on September 13, 1974, Unit 2 was in shutdown due to high drywell leakage. Inspections were in progress to determine the cause of the leakage. At this time, a leak was discovered on 2B recirc. loop at

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September 19, 1974

the connection of 2B recirc. pump discharge valve bypass line (2-0203B-4"-A) with the recirc. loop (2-0201B-28"-A). The line was cracked at the point where the line is welded to an inverted reducer. The crack was a circumferential crack which ran along approximately 75% of the pipe circumference and was completely through the pipe in two areas. This crack was upstream of the bypass valve and was easily isolatable.

The next day a crack was found on the 2A recirc. loop. The crack was also in the 4" equalizing line, but downstream of the bypass valve at the 28"x4" reducer to the 28" recirc. riser. This crack consisted of an approximately 3/4" long circumferential crack with about a 1-1/2" tail running along the length of the pipe. Only the circumferential part of the crack was completely through the pipe. This crack was not isolatable.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE

At this time, no apparent cause is known. Pieces of the cracked pipe were sent out for analysis. A followup letter will be written when the results of these analyses are returned.

ANALYSIS OF OCCURRENCE

There were no safety consequences to the public or plant personnel as a result of this occurrence because the cracks were found before any major damage was done. All water was contained in the drywell sumps and pumped to Radwaste for processing. The shift by shift monitoring of the drywell sumps found this problem immediately and allowed for a safe shutdown before excessive leakage resulted. Had the pipe broken under operation, LPCI, HPCI and core spray were available to provide core cooling.

CORRECTIVE ACTION

The 2B loop crack was isolated, the section of cracked pipe cut out, and a new section welded in. The 2A loop is at the present, unisolatable. Plans are being formulated for repairing this crack. The followup letter will include the method used for repairing this crack. Subsequent investigations will be conducted on Unit 3 to disclose similar cracking at the earliest opportunity.

FAILURE DATA

These are the first failures of this type.

Sincerely,

G. J. Niedrich
for B. B. Stephenson
Superintendent

BBS:do