

**AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)**

CONTROL NO: 1397

FILE:

FROM: Wisconsin Public Service Corporation Green Bay, Wisconsin 54305 E. W. James			DATE OF DOC 2-15-74		DATE REC'D 2-21-74		LTR X	MEMO	RPT	OTHER	
TO: Mr. O'Leary			ORIG 1 signed		CC		OTHER		SENT AEC PDR X SENT LOCAL PDR X		
CLASS	UNCLASS	PROP INFO	INPUT		NO CYS REC'D		DOCKET NO:				
	XXXX				1		50-305				

DESCRIPTION:
Ltr submitting Abnormal Occurrence # 74-1,
on 2-8-74, regarding hair line crack instrument
impulse line.....

ENCLOSURES:

ACKNOWLEDGED

Do Not Remove

PLANT NAME: Kewaunee

FOR ACTION/INFORMATION

2-21-74

AB

BUTLER(L)	SCHWENCER(L)	ZIEMANN(L)	REGAN(E)
W/ Copies	W/ Copies	W/ Copies	W/ Copies
CLARK(L)	STOLZ(L)	DICKER(E)	
W/ Copies	W/ Copies	W/ Copies	W/ Copies
GOLLER(L)	VASSALLO(L)	KNIGHTON(E)	
W/ Copies	W/ Copies	W/ Copies	W/ Copies
✓ KNIEL(L)	SCHEMEL(L)	YOUNGBLOOD(E)	
W/ 7 Copies	W/ Copies	W/ Copies	W/ Copies

INTERNAL DISTRIBUTION

<u>REG FILE</u>	<u>TECH REVIEW</u>	DENTON	<u>LIC ASST</u>	<u>A/T IND</u>
✓ AEC PDR	✓ HENDRIE	GRIMES		BRAITMAN
✓ OGC, ROOM P-506A	✓ SCHROEDER	GAMMILL	DIGGS (L)	SALTZMAN
✓ MUNTZING/STAFF	✓ MACCARY	KASTNER	GEARIN (L)	B. HURT
✓ CASE	✓ KNIGHT	BALLARD	GOULBOURNE (L)	<u>PLANS</u>
GIAMBUSSO	✓ PAWLICKI	SPANGLER	LEE (L)	MCDONALD
BOYD	✓ SHAO		MAIGRET (L)	DUBE w/Input
MOORE (L)(BWR)	✓ STELLO	<u>ENVIRO</u>	✓ SERVICE (L)	<u>INFO</u>
DEYOUNG(L)(PWR)	✓ HOUSTON	MULLER	SHEPPARD (E)	C. MILES
SKOVHOLT (L)	✓ NOVAK	DICKER	SMITH (L)	✓ B. KING
P. COLLINS	✓ ROSS	KNIGHTON	TEETS (L)	
DENISE	✓ IPPOLITO	YOUNGBLOOD	WADE (E)	
<u>REG OPR</u>	✓ TEDESCO	REGAN	WILLIAMS (E)	
✓ FILE & REGION(3)	✓ LONG	PROJECT LDR	WILSON (L)	
✓ MORRIS	✓ LAINAS		S. REED (L)	
✓ STEELE	✓ BENAROYA	<u>HARLESS</u>		
	✓ VOLLMER			

EXTERNAL DISTRIBUTION

✓ 1 - LOCAL PDR Kewaunee, Wis.	(1)(2)(10)-NATIONAL LAB'S	1-PDR-SAN/LA/NY
✓ 1 - DTIE(ABERNATHY)	1-ASLBP(E/W Bldg, Rm 529)	1-GERALD LELLOUCHE
✓ 1 - NSIC(BUCHANAN)	1-W. PENNINGTON, Rm E-201 GT	BROOKHAVEN NAT. LAB
1 - ASLB(YORE/SAYRE/ WOODARD/"H" ST.	1-CONSULTANT'S	1-AGMED(Ruth Gussman)
✓ 16 - CYS ACRS HOLDING SENT TO LIC ASST.	NEWMARK/BLUME/AGBABIAN	RM-B-127, GT.
M. SERVICE ON 2-21-74	1-GERALD ULRICKSON...ORNL	1-RD..MULLER..F-309 GT

ab occur

LB

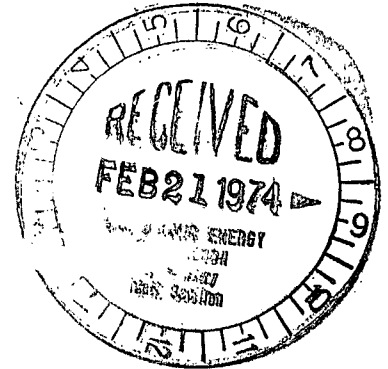
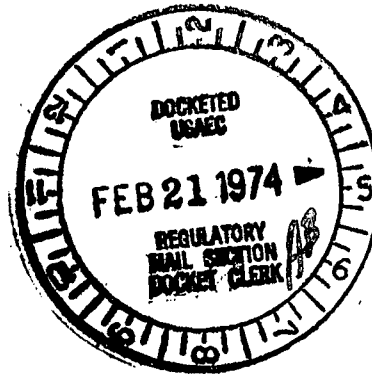
WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

February 15, 1974

Mr. J. F. O'Leary, Director
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545



Dear Mr. O'Leary:

Subject: Docket 50-305
Operating License DPR-43
Abnormal Occurrence Report

In accordance with the requirements of Technical Specifications,
Paragraph 6.6.2.a. and Regulatory Guide 1.16, we submit the following:

Report Number: 50-305/74-1

Report Date: February 15, 1974

Occurrence Date: February 8, 1974

Facility: Kewaunee Nuclear Power Plant
Kewaunee, Wisconsin

Identification of Occurrence: Hair line crack in instrument impulse line

Conditions Prior to Occurrence: Hot Shutdown

Normal Operating Temperature 547°F

Normal Operating Temperature - 2200 psig

Startup Tests in Progress -

ST2.20.2 - Rod Position Indication Calibration

KT3.2 - Rod Drop Test

Maximum Letdown - Approximately 70 gpm for C1 removal

Description of Occurrence:

Maintenance personnel in the area observed a water spray from the piping in the charging room. The spray resulted from a hair line crack in the 3/8 inch diameter tubing which functions as the sensing or impulse line for the flow meter in the charging system. The charging and letdown were stopped and the leak was located in the impulse line and it was

1397

isolated. Plant conditions were restored to normal. There was no radiation contamination since coolant system activity was less than 1×10^{-7} uc/ml. Charging and letdown were restored.

Designation of Apparent Cause of Occurrence: Component Failure

Analysis of Occurrence:

The flow meter measures the flow of all three charging pumps which obtain suction from the volume control tank. The loss of reactor coolant is prevented by two check valves both located inside the containment. In addition, there are two manual valves and one remote operated valve downstream of the flow meter to further isolate the system. This crack is not a breach of the primary system boundary.

There could be loss of water from the volume control tank. Since the water in the volume control tank comes from the letdown line, there is the possibility that it could be contaminated depending upon the activity in the reactor coolant system. The water which would be lost from a small crack such as the one that occurred would be detected in one of several ways.

- a. If it persisted, the level in the volume control tank would drop.
- b. The charging system area monitor would detect activity when the activity was high enough for the monitor to sense it.
- c. The auxiliary operator would detect the leak during his tour of the plant, twice each shift.
- d. A portable, more sensitive monitor is located in the area which would detect the leak and sound an alarm.
- e. The auxiliary building ventilation system monitor would detect any radiation if it persisted for any period of time.

The charging room is an area where, during power operation, personnel are normally not present except for the roving operator and maintenance personnel working under a radiation work permit.

This incident presented no hazard to the public and we believe that there would be no significant safety implication in the event of a similar hair line crack occurring.

Corrective Action:

The actual cause of the hair line crack has not been determined. The crack did occur in a straight section of tubing following a bend and within 1/4 inch of the valve manifold. We believe that a combination of fluid pulsations and vibration caused the crack. We have been making

vibration studies of the entire charging system and expect that these studies will provide us with more information for further evaluation. We have had our auxiliary operator check various areas twice each shift, on his rounds including this area. We, therefore, believe that should this type of failure reoccur, that it would be detected within a short period of time, without endangering the safety of the public.

Failure Data:

This type of failure has not occurred in this system or other similar systems to date on the Kewaunee Nuclear Power Plant. Equipment identification is not applicable.

Very truly yours,



E. W. James, Senior Vice President
Power Generation & Engineering

EWJ:sna

cc - Mr. James G. Keppler