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CONTROL NO: 1032

FILE: INCIDENT REPORT

FROM:	DATE OF DOC	DATE REC'D	LTR	TWX	RPT	OTHER
Wisconsin Public Svc. Corp Green Bay, Wis. 54305 Mr. E.W. James	1-27-75	1-30-75	X			

TO:	ORIG	CC	OTHER	SENT AEC PDR	SENT LOCAL PDR
E.G. Case	1 signed			XXX	XXX

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX			1	50-305

DESCRIPTION:

Ltr reporting abnormal occurrance No. 50-305/75-3.....concerning...Through wall leak in charging line vent piping adjacent to valve CVC-33....

ENCLOSURES:

PLANT NAME: Kewaunee

FOR ACTION/INFORMATION 1-30-75 JB

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G.T.

WISCONSIN PUBLIC SERVICE CORPORATION

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

January 27, 1975

Mr. Edson Case, Acting Director
Directorate of Licensing
Office of Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20545

Dear Mr. Case:

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

In accordance with the requirements of Technical Specifications, Paragraph 6.9.1 (Amendment 7) and 1.0.a.1.(e), we submit the following:

Report Number: 50-305/75-3

Occurrence Date: January 17, 1975

Facility: Kewaunee Nuclear Power Plant
Kewaunee, Wisconsin

Identification of Occurrence: Through wall leak in charging line vent piping adjacent to valve CVC-33.

Conditions Prior to Occurrence: Reactor Critical - 75% power
Normal Operating Temperature - 556°F Tavg
Normal Operating Pressure - 2235 psig

Description of Occurrence: A crack developed in the 3/4" pipe to vent valve CVC-33 adjacent to the connecting tee in the 2" charging line. The crack was approximately 1/4" long at the pipe's exterior surface. The leak was sufficiently small so as to not restrict operation. The leak was discovered by two I & C men while exiting containment. At the time of discovery, there existed a small pool of water which, within one hour, grew to sufficient size to begin flowing to drains.

1032

The small pool size at time of discovery indicated that the leak developed within hours of discovery.

Analysis of Occurrence:

The gross primary coolant activity at the time of the leak was 6.7×10^{-2} uc/cc. The gross containment air activity at the time of the leak was 5.5×10^{-5} uc/cc. The local air activity adjacent to the leak one hour after discovery was 9.1×10^{-5} uc/cc. The containment air activity monitor did not respond to the leak, due to the large containment volume, small leak size, and low primary coolant gross activity.

No danger to the health and safety of the public existed because of the location of the leak within containment, its small magnitude and low primary coolant activity.

This particular section of piping developed a leak on March 13, 1974, which was reported as an abnormal occurrence, Report No. 50-305/74-2.

Corrective action taken as a result of the first leak consisted of reducing the pipe stub length from approximately 12 inches to approximately 3 inches since fatigue was assumed to be the cause of failure. The charging system employs positive displacement pumps which create pulsations within and along the charging line. These pulsations force oscillations of the associated piping in certain locations due to piping configuration. The mechanism for long term fatigue failure does exist at certain locations within charging system and apparently resulted in the failure of the pipe adjacent to CVC-33.

Corrective Action:

The pipe stub was reduced to the minimum length which would allow proper welding techniques, approximately 3/4" between the tee and the valve body. Employing approved welding procedures, the piping wall along this 3/4" section was increased greater than 1/2" such that the valve body appears to be directly welded to the tee on the charging line.

An evaluation of the charging system is in progress to provide a means to dampen the pulsations associated with the positive displacement charging pumps. Specifications

for pulsation dampeners are currently being evaluated for anticipated installation within six months to preclude similar fatigue failure of appendage piping within the charging system which has constituted four abnormal occurrence reports.

Failure Data: See Abnormal Occurrence Report No. 50-305/74-2.

Very truly yours,

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

EWJ:sna

cc - Mr. James G. Keppler, US NRC
Mr. Dwane Boyd, US NRC - Resident Inspector

LICENSEE EVENT REPORT

CONTROL BLOCK: (1–6) **(PLEASE PRINT ALL REQUIRED INFORMATION)**

	LICENSEE NAME	LICENSE NUMBER	LICENSE TYPE	EVENT TYPE
01	WIKNP 1	00-00000-00	4 1 1 1 1	0 1
(7–8)	(9–14)	(15–25)	(26–30)	(31–32)

	CATEGORY	REPORT TYPE	REPORT SOURCE	DOCKET NUMBER	EVENT DATE	REPORT DATE
01 CON'T	P 0	T	L	0 5 0 - 0 3 0 5	0 1 1 7 7 5	0 1 2 7 7 5
(7–8)	(57–58)	(59)	(60)	(61–68)	(69–74)	(75–80)

EVENT DESCRIPTION

02 A crack developed in the 0.75 inch pipe to vent valve CVC-33 in the charging
03 line. The same section of pipe failed on March 13, 1974. Pipe stub was made
04 as small as possible and its wall thickness increased to more than .5 inch.
05 No danger to health and safety of the public, failure was within containment.
06 50-305/75-3

	SYSTEM CODE	CAUSE CODE	COMPONENT CODE	PRIME COMPONENT SUPPLIER	COMPONENT MANUFACTURER	VIOLATION
07	C G	F	P I P E X X	A	X 9 9 9	N
(7–8)	(9–10)	(11)	(12–17)	(43)	(44–47)	(48)

CAUSE DESCRIPTION

08 Fatigue failure of pipe
09
10

	FACILITY STATUS	% POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION
11	E	0 7 5	NA	a	I & C personnel observed leak
(7–8)	(9)	(10–12)	(13–44)	(45)	(46–80)

	FORM OF ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY	LOCATION OF RELEASE
12	Z	Z	NA	NA
(7–8)	(9)	(10)	(11–44)	(45–80)

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION
13	0 0 0	Z	NA
(7–8)	(9–11)	(12)	(13–80)

PERSONNEL INJURIES

	NUMBER	DESCRIPTION
14	0 0 0	NA
(7–8)	(9–11)	(12–80)

OFFSITE CONSEQUENCES

15 NA

LOSS OR DAMAGE TO FACILITY

	TYPE	DESCRIPTION
16	Z	NA
(7–8)	(9)	(10–80)

PUBLICITY

17 NA

ADDITIONAL FACTORS

18 Gross primary activity 6.7 x 10^{-2} uc/cc, no change in containment activity noted

19

NAME: M. E. Stern PHONE: (414) 432-3311