

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 9 7 1	PAGE(S) 1 OF 0 2
--	--	---------------------

TITLE (4)
Pressure Boundary Leakage

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0 2	0 3	8 5	8 5	0 1	1	0 2	2 8	8 5			0 5 0 0 0 0
											0 5 0 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9) 2	20.402(b)		20.406(c)		50.73(a)(2)(iv)		73.71(b)
	20.406(a)(1)(i)		50.36(e)(1)		50.73(a)(2)(v)		73.71(c)
	20.406(a)(1)(ii)		50.36(e)(2)		50.73(a)(2)(vii)	X	OTHER (Specify in Abstract below and in Text, NRC Form 360A)
	20.406(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		50.72(b)(2)(i)(A)
	20.406(a)(1)(iv)		50.73(a)(2)(iii)		50.73(a)(2)(viii)(B)		
	20.406(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(ix)		

LICENSEE CONTACT FOR THIS LER (12)

NAME R. L. Koenigs, Compliance Engineer	TELEPHONE NUMBER AREA CODE: 5 0 9 3 7 7 1 - 2 5 0 1 1
--	--

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) Ext. 2279

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
X	S J P S F	-	-	-	N				
X	B O P S F	-	-	-	N				

SUPPLEMENTAL REPORT EXPECTED (14)

<input checked="" type="checkbox"/> YES (If so, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH: 0 7	DAY: 0 1	YEAR: 8 5
--	-----------------------------	-------------------------------	------------	----------	-----------

ABSTRACT (Limit to 400 spaces - 8 spaces/line - 17 lines single-space typewritten lines) (16)

On 2/3/85, during a routine inspection, two 3/4" lines were found to have leakage. These 3/4" drain lines formed part of the primary system pressure boundary. The reactor was shutdown and the lines were repaired per ASME requirements and returned to service.

8503120325 850228
PDR ADOCK 05000397
S PDR

JF22
11

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Washington Nuclear Plant - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 9 7 8 5	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 5	0 1 1	0 0 0	2	OF 0 2

TEXT (If more space is required, use additional NRC Form 388A's) (17)

Plant Conditions

- a) Power Level - 3%
- b) Plant Mode - 2

Event

On 2/3/85, during a routine inspection required by Plant startup procedures, two 3/4" lines were observed with slight leakage. The leakage, in both cases, was far below the Plant limit of 5 gpm (unidentified) and had not caused a reading on plant leakage monitors, which would have required action per the Technical Specifications. Both lines [RHR(55)45-2 and RFW(55)-4-6] are 3/4" drain lines and are considered part of the primary system pressure boundary.

Immediate Corrective Action

The Reactor was shutdown and both lines were repaired per ASME Section XI procedures. Subsequent non-destructive tests verified the repair adequacy and the lines were returned to service.

Further Corrective Action

The failure mechanism for these lines has been determined to be high cycle fatigue. Visual examination showed that the failures occurred in the 3/4" pipe adjacent to the socket and indicated fatigue was a factor. Electron microscopy has been performed to confirm failure mechanism and has characterized the fatigue as high cycle.

Pipe displacement data from Power Ascension Testing is being reviewed to determine if frequencies corresponding to high cycle fatigue were evident. Based upon these evaluations, the need for surface examinations of additional drain lines and the necessity for addition of supports to the drain lines which failed will be determined.

Safety Significance

The leakage observed, in both cases, was small (approximately 1 gpm, combined, at approximately 400 psig). The preliminary evaluations conducted have supported a determination that this failure mechanism will apply only to small bore (2.0" and less diameter) piping.

The allowable leakage limits for the reactor coolant system have been based on predicted and experimentally observed pipe crack behavior. The probability is small that cracks associated with the leakage observed would have propagated rapidly. However, even had these lines completely failed, the Plant Leakage Detection System would have alerted Plant operators to shutdown the Reactor. At no time would this have impaired the Plant's ability to maintain the Reactor in a safe condition. There was no hazard to the health and safety of the public or plant personnel.

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

Docket No. 50-397
February 28, 1985

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 85-011

Dear Sir:

Transmitted herewith is Licensee Event Report No. 85-011 for WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the item of reportability, corrective action taken, and action taken to preclude recurrence.

This is the follow-up report to the verbal notification given at 0640 hours on February 3, 1985.

Very truly yours,

C.M. Powers for

J. D. Martin (M/D 927M)
WNP-2 Plant Manager

JDM:mm

Enclosure:

Licensee Event Report No. 85-011

cc: Mr. John B. Martin, NRC - Region V
Mr. A. D. Toth, NRC - Site (901A)
Ms. Dottie Sherman, ANI
INPO Records Center - Atlanta, GA

IE22
11