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ACCESSION NBR: 9002230047 DOC. DATE: 90/02/07 NOTARIZED: NO DOCKET #
 FACIL: 50-334 Beaver Valley Power Station, Unit 1, Duquesne Light C 05000334
 AUTH. NAME AUTHOR AFFILIATION
 NOONAN, T.P. Duquesne Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-001-00: on 900108, reactor coolant leakage in excess of Tech Specs.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc. W/8 ltr.

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	PD1-4 LA	1 1	PD1-4 PD	1 1
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	ACRS WYLIE	1 1	AEOD/DOA	1 1
	AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
	DEDRO	1 1	NRR/DET/ECMB 9H	1 1
	NRR/DET/EMEB9H3	1 1	NRR/DET/ESGB 8D	1 1
	NRR/DLPQ/LHFB11	1 1	NRR/DLPQ/LPEB10	1 1
	NRR/DOEA/OEAB11	1 1	NRR/DREP/PRPB11	2 2
	NRR/DST/SELB 8D	1 1	NRR/DST/SICB 7E	1 1
	NRR/DST/SPLB8D1	1 1	NRR/DST/SRXB 8E	1 1
	<u>REG FILE</u> 02	1 1	RES/DSIR/EIB	1 1
	RGN1 FILE 01	1 1		
EXTERNAL:	EG&G WILLIAMS, S	4 4	L ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
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February 7, 1990
ND3MNO:2021

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
LER 90-001-00

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

In accordance with Appendix A, Beaver Valley Technical Specifications, the following Licensee Event Report is submitted:

LER 90-001-00, 10 CFR 50.73.a.2.ii, "Reactor Coolant Leakage in Excess of Technical Specifications".

Very truly yours,

T. P. Noonan
General Manager
Nuclear Operations

cj

Attachment

9002230047 900207
PDR ADOCK 05000334
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February 7, 1990
ND3MNO:2021
Page two

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Beaver Valley Power Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 3 4	PAGE (3) 1 OF 0 3
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TITLE (4)
Reactor Coolant Leakage in Excess of Technical Specifications

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 1	0 8	9 0	9 0	0 0 1	0 0	0 2	0 7	9 0	N/A		0 5 0 0 0
0 1	0 8	9 0	9 0	0 0 1	0 0	0 2	0 7	9 0	N/A		0 5 0 0 0

OPERATING MODE (9) **1**

POWER LEVEL (10) **1 0 0**

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(vii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Thomas P. Noonan, General Manager of Operations	TELEPHONE NUMBER
	AREA CODE: 4 1 2 NUMBER: 6 1 4 3 1 - 1 2 5 8

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS
X	C B R T V	R 3 4 0		N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On 1/8/90, operators, performing regularly scheduled Reactor Coolant System (RCS) leak rate testing, determined there was an unidentified RCS leakage of 0.927 gallons per minute (gpm). A second leak rate test was immediately initiated to confirm this result. The second test found an unidentified leak rate of 1.45 gpm. This was in excess of the Technical Specification limit of 1.0 gpm unidentified leakage. Operators performed a containment entry and discovered a leak on the seal injection line in the "A" Reactor Coolant Pump (RCP) cubicle. Operations personnel simultaneously initiated a controlled shutdown and dispatched a second crew with special equipment (splash deflectors and plastic anti-contamination clothing) to attempt to isolate the leak. This second crew determined that the leak was a weld leak on the "A" RCP No. 1 seal delta pressure transmitter instrument line. The operators stopped the leak by manually isolating the pressure transmitter. Reactor power had been reduced from 100 percent (%) to 68% power. A subsequent RCS leak rate test verified that leak had been isolated. The plant returned to full power operation. There were no safety implications due to this event. This event is bounded by Beaver Valley's UFSAR Analysis section 14.3 - Loss of Coolant Accident.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Beaver Valley Power Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 3 4	LER NUMBER (6)			PAGE (3)		
		YEAR 9 0	SEQUENTIAL NUMBER - 0 0 1	REVISION NUMBER - 0 0	OF		

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Description of Event

On midnight shift 1/8/90, during 100 percent (%) power operation, operators performed the regularly scheduled Reactor Coolant System (RCS) Leak Rate Operational Surveillance Test (OST 1.6.2). This test was completed at 0530 Hours and indicated an unidentified RCS leak rate of 0.927 gallons per minute (gpm). The recent previous leak rate tests had shown no detectable unidentified leakage. Since the Technical Specification limit on unidentified RCS leakage is 1.0 gpm, a second OST 1.6.2 was immediately initiated. This test requires one to two hours for data collection. While the second leak rate test was in progress, other plant parameters were monitored in an attempt to identify the source of the leakage. No indications of leakage into the Primary Auxiliary Building were identified. The Containment Dew Point was verified to be increasing, indicating a potential leak in the Containment Building.

At 0605 Hours, the second leak rate test determined the unidentified RCS leak rate to be 1.45 gpm. At this time, the station entered the ACTION STATEMENT for Technical Specification 3.4.6.2, "Reactor Coolant System Operational Leakage." This allowed the station 4 hours to stop the leak before requiring a shutdown within the following 6 hours.

A crew of operators was sent into Containment to attempt to identify and isolate the leak. At 0830 Hours, they reported the leak was in the "A" Reactor Coolant Pump (RCP) cubicle. Although they could not isolate the leak due to the spray from the leak, they did identify it as being on the "A" RCP seal injection piping, near manual valve [CH-343]. They also stated that the leak appeared to be high pressure, low temperature water (not steam). This was consistent with the leak being in the 2500 psig, 100 degree Fahrenheit seal injection piping. Based on their observations, the operators determined that the leak could be isolated by closing [CH-343]. The operators then exited containment.

Preparations were initiated for sending a second crew of operators into containment with special equipment to enable them to isolate the leak. Plastic splash deflectors were to be used to deflect the spray from the operators. The operators were also to be wearing plastic anti-contamination clothing for protection in the event that they were exposed to the leakage. At 1004 Hours, a controlled plant shutdown was initiated.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Beaver Valley Power Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 3 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 0	- 0 0 1	- 0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

At 1040 Hours, the second crew entered containment. At 1154 Hours, the crew reported the leak was isolated by closing [CH-343]. The shutdown was terminated at this time. The plant was stabilized at 68% power. A third leak rate test was initiated. This third leak rate test verified that the leak had been isolated.

Cause of Event

The leak occurred due to a weld crack where the instrument sensing line for "A" RCP Number 1 Seal Differential Pressure Transmitter [PT-CH-156] was joined to transmitter isolation valve [CH-343]. A review of the "A" Reactor Coolant Pump once-per-shift vibration logs for 1989 showed no incidents of high vibrations associated with this pump. A review of station records showed no previous failures of this weld, of this pressure transmitter or of its isolation valve. No physical examination of the weld has been performed at this time.

Previous Similar Events

There have been no previous events associated with Differential Pressure Transmitter [PT-CH-156], its associated isolation valve [CH-343] or the welds on this transmitter's sensing lines. There have been three previous events (LERs 76-041, 81-014 and 88-016) involving RCS Pressure Boundary Leakage due to failures of other instrument lines.

Corrective Action

Operators isolated the leaking weld. A 10CFR50.59 analysis was performed to verify that operation could continue while the differential pressure transmitter was isolated. The weld will be repaired during a future plant outage.

Safety Analysis

There were no safety implications due to this event. The leakage associated with this event was bounded by analysis in Beaver Valley Unit 1 UFSAR section 14.3, "Loss of Coolant Accident". A 10CFR50.59 analysis was performed to verify that there are no safety implications associated with operating with Differential Pressure Transmitter [PT-CH-156] isolated and removed from service. This transmitter has no safety functions. Redundant instrumentation exists for determining the differential pressure across the Number 1 Seal.