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September 15, 1995
ND3MNO:3715

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, Licensee No. DPR-66
LER 95-006-00

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

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

LER 95-006-00, 10 CFR 50.73.a.2.i.A, "Pressure Boundary Leakage Results in Plant Shutdown".

L. R. Freeland
General Manager
Nuclear Operations

JGT/jcd

Attachment

IE22

cc: Mr. T. T. Martin, Regional Administrator
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FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Beaver Valley Power Station Unit 1	05000334	1 OF 3

Pressure Boundary Leakage Results in Plant Shutdown

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 NAME	DOCKET NUMBER
08	18	95	95	-- 006 --	00	09	15	95	N/A	05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 20 CFR § (Check one or more) (11)					
		20.402(b)		20.405(c)		50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	100	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)	OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in abstract below and in Text NRC Form 366A)
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (include Area Code)
L. R. Freeland, General Manager Nuclear Operations	(412) 643-1258

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS				COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	AB	XXXX	XXXX	N						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (if yes, complete EXPECTED SUBMISSION DATE)	X	NO				

ABSTRACT (Limited to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On 8/18/95, with Unit 1 in power operation at 100% reactor power, an increased containment sump pumpout rate, and leakage as measured by a reactor coolant system (RCS) water inventory surveillance test, were observed. Unidentified leakage had increased from 0.03 gallons per minute (gpm) to 0.12 gpm. Containment entries were made to identify the source of the leakage, and the investigation crew exiting containment at 2033 hours on 8/18/95 reported that they had observed leakage at the socket weld of CH-340, the "A" reactor coolant pump seal bypass vent. In accordance with Technical Specifications, a plant shutdown to cold shutdown was commenced at 2053 hours on 8/18/95 due to unisolable pressure boundary leakage. There were minimal safety implications as a result of this event. The amount of leakage was extremely small (0.12 gpm) and well within the capability of the normal charging system. Leakage was properly contained in plant collection systems. Repairs to the leaking weld were completed on 8/21/95. Unit 1 returned to power operation at 1542 hours on 8/27/95.

M 366 U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 1	05000334	95	006	00	2 OF 3

If more space is required, use additional copies of NRC Form 366A (17)

SCRIPTION OF EVENT

8/18/95, with Unit 1 in Power Operation (Operational Mode 1) at 100% reactor power, a review of the operating logs showed ncreased containment sump pumpout rate over the previous three days and increased "unidentified" leakage (from 0.03 gpm 12 gpm) on a reactor coolant system (RCS) water inventory surveillance test. At 1400 hours, a containment entry was made entify the source of the leakage. The area of leakage was reported to be in the vicinity of the "A" reactor coolant pump. An tional containment entry made at 1918 hours confirmed the area of leakage and determined that the leakage was unisolable sure boundary leakage. The crew in containment reported that they had observed leakage at CH-340, the "A" reactor coolant p seal bypass vent. At 2053 hours, in accordance with plant Technical Specification 3.4.6.2, a plant shutdown to cold down conditions was commenced. Cold shutdown (Operational Mode 5) was entered at 0233 hours on 8/20/95.

SE OF EVENT

cause of this event was degradation of the socket weld adjacent to CH-340. The weld degradation was described as ration through approximately 25% of the weld's circumference. The cause for the weld degradation is under investigation.

RRECTIVE ACTIONS

following corrective actions have been or will be taken as a result of this event:

DESCRIPTION OF EVENT

On 8/18/95, with Unit 1 in Power Operation (Operational Mode 1) at 100% reactor power, a review of the operating logs showed an increased containment sump pumpout rate over the previous three days and increased "unidentified" leakage (from 0.03 gpm to 0.12 gpm) on a reactor coolant system (RCS) water inventory surveillance test. At 1400 hours, a containment entry was made to identify the source of the leakage. The area of leakage was reported to be in the vicinity of the "A" reactor coolant pump. An additional containment entry made at 1918 hours confirmed the area of leakage, and determined that the leakage was unisolable pressure boundary leakage. The crew in containment reported that they had observed leakage at CH-340, the "A" reactor coolant pump seal bypass vent. At 2053 hours, in accordance with plant Technical Specification 3.4.6.2, a plant shutdown to cold shutdown conditions was commenced. Cold shutdown (Operational Mode 5) was entered at 0233 hours on 8/20/95.

CAUSE OF EVENT

The cause of this event was degradation of the socket weld adjacent to CH-340. The weld degradation was described as perforation through approximately 25% of the weld's circumference. The cause for the weld degradation is under investigation.

CORRECTIVE ACTIONS

The following corrective actions have been or will be taken as a result of this event:

1. CH-340 weld repair, liquid dye penetrant testing, and inspection were completed on 8/21/95. Unit 1 returned to power operation on 8/27/95.

2. Liquid dye penetrant testing of similar penetrations on the other loops was performed. No deficiencies were found.

3. An investigation is in progress to determine the cause of the weld degradation.

REPORTABILITY

This event was reported to the Nuclear Regulatory Commission at 2016 hours on 8/18/95, in accordance with 10CFR50.72(b)(1)(i)(A) as an event involving the completion of a plant shutdown required by Technical Specifications. This written report is being submitted in accordance with 10CFR50.73(a)(2)(i)(A), as an event involving the completion of a plant shutdown required by Technical Specifications.

SAFETY IMPLICATIONS

There were minimal safety implications to the public as a result of this event. Although there was reactor coolant system pressure boundary leakage, this leakage was contained within the containment structure. The amount of leakage was well within the capabilities of a single charging pump to maintain reactor coolant system inventory. This type of pressure boundary leakage was evaluated in the Updated Final Safety Analysis Report (UFSAR), Section 14.3.1 "Loss of Reactor Coolant From Small Ruptured Pipes or From Cracks in Large Pipes Which Actuates Emergency Core Cooling System".

SIMILAR EVENTS

Beaver Valley Unit 1 has reported three similar events involving plant shutdowns due to pressure boundary leakage.

1. LER 1-88-016-00 "Unit Shutdown Due to Pressure Boundary Leakage". This event involved a weld leak at an RCS seal injection drain valve.

2. LER 1-91-002-00 "Reactor Coolant System Pressure Boundary Leakage results in Plant Shutdown". This event involved leakage of a socket weld on the Loop 1B Cold Leg Vent Valve (disc pressurization connection).

3. LER 1-93-013-00 "Unit 1 Reactor Trip and Required Shutdown, Dual Unit Loss of Offsite Power". This event included discovery of leakage of a fillet weld on the Loop 1A Cold Leg Vent Valve (disc pressurization connection) during a post-trip walkdown inside containment.