NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Beaver Valley Power Station Unit 1	0 5 0 0 0 3 3 4	1 OF 0 3

TITLE (4)

Inadvertent Start of Auxiliary Feedwater Pump Due to Procedural Deficiency

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)
									N/A	0 5 0 0 0
0 2	2 5	8 8	8 8	- 0 0 3	- 0 0	0 3	2 8	8 8	N/A	0 5 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
3	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10): 0 0 0	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 (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	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
Thomas P. Noonan, Plant Manager	AREA CODE: 4 1 2 — 6 4 3 - 1 2 5 8

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
D	X X	X X X X	X X X X	N							

SUPPLEMENTAL REPORT EXPECTED (14)

	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO			

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

On 2/25/88, with the Unit in Hot Standby, surveillance testing of the steam-driven auxiliary feedwater pump (FW-P-2) was being conducted. The test included testing of the inlet steam supply valves from the Emergency Shutdown Panel (ESP). The inlet valves were stroked and FW-P-2 was shutdown. Control of the valves was then transferred to the Control Room. During the transfer a momentary loss of power occurred in the circuitry for the inlet steam supply valves. This initiated a start demand signal for FW-P-2, however the pump would not start because it was previously shutdown and it was not latched. An additional start signal for the motor-driven auxiliary feedwater pumps (FW-P-3A,3B) was generated when FW-P-2 failed to develop the required discharge pressure after 10 seconds. FW-P-3A started, however FW-P-3B did not start. FW-P-3A was immediately shutdown. The cause for the start of FW-P-3A was due to a procedural deficiency in the surveillance test. The procedure was revised to transfer steam inlet valve control with the valves open. The failure of FW-P-3B to start was due to a momentary sticking of a pressure switch. The pressure switch was retested satisfactorily. There were no safety implications to the public as a result of this event. The motor-driven auxiliary feedwater pumps are designed to start upon degraded steam-driven pump operation (UFSAR Sect. 10.3.5.2.2).

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

On 2/25/88, with the Unit in Hot Standby (400 counts per second on the Source Range monitors), surveillance testing of the steam-driven auxiliary feedwater pump (FW-P-2) was being conducted. The testing included stroking of the inlet steam supply trip valves (TV-MS-105A,B) from the Emergency Shutdown Panel (ESP). The inlet trip valves were stroked and the valves were closed in accordance with the surveillance test (OST 1.24.4). FW-P-2 was then shutdown by manually closing the trip-throttle valve. The trip-throttle valve must be relatched in order for FW-P-2 to operate properly. Control of TV-MS-105A was then transferred back to the Control Room. The transfer process results in a momentary de-energization of the solenoid operated valve which vents air pressure to open TV-MS-105A. This causes a start demand signal for FW-P-2.

FW-P-2 would not start, however because it was previously shutdown and required relatching the trip-throttle valve in order to function. Since FW-P-2 did not start, the required discharge pressure was not developed. The system design is such that the motor-driven auxiliary feedwater pumps (FW-P-3A,3B) are started whenever FW-P-2 does not develop greater than 500 psig discharge pressure within 10 seconds. A start signal was therefore generated for FW-P-3A and 3B.

FW-P-3A started as designed. After verifying that FW-P-3A was not required to supply auxiliary feedwater, the pump was immediately shutdown. However, FW-P-3B did not start upon the failure of FW-P-2 to achieve discharge pressure. Each motor-driven auxiliary feedwater pump uses a separate pressure switch sensing the discharge of FW-P-2 to determine if an auto-start is required. The failure of FW-P-3B to start was thought to be a momentary misoperation of the pressure switch for FW-P-3B (PS-FW-157-2). The pressure switch hung up and did not sense the low discharge pressure. The pressure switch was retested following the event and functioned properly, causing an auto-start signal to FW-P-3B.

The cause for this event was attributed to a procedural deficiency. The surveillance procedure specified that the inlet steam supply valves (TV-MS-105A,B) be in the closed position prior to the transfer of valve control back to the Control Room. This resulted in a momentary loss of power, causing TV-MS-105A to open. TV-MS-105A was off its fully closed limit switch, thus preventing the solenoid operated valve circuitry from re-energizing and allowing air to TV-MS-105A, closing the valve. This procedure (OST 1.24.4) was immediately revised to require that TV-MS-105A,B be in the open position prior to transferring the valve control back to the Control Room and then shutting down FW-P-2. Additionally, a

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

Maintenance Work Request has been generated to reverify operability of PS-FW-157-2 during the next scheduled performance of OST 1.24.4.

The Nuclear Regulatory Commission was notified of this event on 2/25/88 at 0548 hours in accordance with 10 CFR 50.72.b.2.ii. This written report is being generated in accordance with 10 CFR 50.73.a.2.iv., as an event involving an Engineered Safety Features (ESF) System actuation.

There were no safety implications to the public as a result of this event. The motor-driven auxiliary feedwater pumps are designed to start upon degraded steam-driven auxiliary feedwater pump operation (UFSAR Sect. 10.3.5.2.2).

Duquesne Light

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March 28, 1988
ND3SPM:0200

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
LER 88-003-00

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 88-003-00, 10 CFR 50.73.a.2.iv, "Inadvertent Start of Auxiliary Feedwater Pump Due to Procedural Deficiency".

Very truly yours,

T. P. Noonan
Plant Manager

tlu

Attachment

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