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December 14, 1990  
ND3MNO:3076

Beaver Valley Power Station, Unit No. 2  
Docket No. 50-412, License No. NPF-73  
LER 90-021-00

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 90-021-00, 10 CFR 50.73.a.2.iv, "ESF Actuation - Feedwater Isolation During Main Steam Isolation Valve Stroke Testing".

Very truly yours,

*K.L. Ostrowski*  
for

T. P. Noonan  
General Manager  
Nuclear Operations

JGT/sl

Attachment

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## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

TITLE (4)

ESF Actuation - Feedwater Isolation During Main Steam Isolation Valve Stroke Testing

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)											
1	1	1	3	9	0	9	0	0	0	2	1	0	0	1	2	1	4	9	0	N/A	0 5 0 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)																														
4	<table border="1"><tr><td>20.402(b)</td><td>20.405(e)</td><td>X</td><td>50.73(a)(2)(iv)</td><td>73.71(b)</td></tr><tr><td>20.405(a)(1)(i)</td><td>50.36(a)(1)</td><td></td><td>50.73(a)(2)(v)</td><td>73.71(c)</td></tr><tr><td>20.405(a)(1)(ii)</td><td>50.36(a)(2)</td><td></td><td>50.73(a)(2)(vi)</td><td>OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td></tr><tr><td>20.405(a)(1)(iii)</td><td>50.73(a)(2)(i)</td><td></td><td>50.73(a)(2)(vii)(A)</td><td></td></tr><tr><td>20.405(a)(1)(iv)</td><td>50.73(a)(2)(ii)</td><td></td><td>50.73(a)(2)(vii)(B)</td><td></td></tr><tr><td>20.405(a)(1)(v)</td><td>50.73(a)(2)(iii)</td><td></td><td>50.73(a)(2)(viii)</td><td></td></tr></table>	20.402(b)	20.405(e)	X	50.73(a)(2)(iv)	73.71(b)	20.405(a)(1)(i)	50.36(a)(1)		50.73(a)(2)(v)	73.71(c)	20.405(a)(1)(ii)	50.36(a)(2)		50.73(a)(2)(vi)	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)(vii)(A)		20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)		20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(viii)	
20.402(b)	20.405(e)	X	50.73(a)(2)(iv)	73.71(b)																											
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20.405(a)(1)(ii)	50.36(a)(2)		50.73(a)(2)(vi)	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)(vii)(A)																												
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20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(viii)																												

LICENSEE CONTACT FOR THIS LER (12)  
NAME  
T.P. Noonan, General Manager Nuclear Operations  
TELEPHONE NUMBER  
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 NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
A	S	B	X	X	X	X	X	X	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 11/13/90 at 0001 hours, with the Unit in Hot Shutdown (Operating Mode 4), a plant heatup to less than 350F was in progress. Operations personnel were preparing to perform partial stroking of the main steam isolation valves (MSIV) as a prerequisite to entry to Hot Standby (Operating Mode 3). The initial conditions for the surveillance testing required the MSIVs to be fully open. The "A" MSIV, 2MSS\*AOV101A, was to be stroked first, however the valve was shut. As the operator opened the valve, to a depressurized steam header, the increased steam flow required to pressurize the steam header resulted in a "swell" of the steam generator level in the "A" steam generator. The level increased from 34% to greater than 75% causing a Feedwater Isolation Signal (FWI), at 0442 hours. The FWI signal caused the closure of feedwater containment isolation valves. The cause for this event was due to operator error. The main steam header was not pressurized prior to opening of the MSIV as required by procedure. The FWI signal was reset and the feedwater containment isolation valves were reopened at 0448 hours. There were no safety implications as a result of this event. The feedwater containment isolation valves closed as designed upon receipt of the FWI signal. All other components actuated by the FWI signal were not in service.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

TEXT (If more space is required, use additional NRC Form 306A's) (17)

DESCRIPTION OF EVENT

On 11/13/90 at 0001 hours, with the Unit in Hot Shutdown (Operating Mode 4), a plant heatup to less than 350F was in progress. The reactor coolant system (RCS) temperature was 305F and RCS pressure was 400 psig. The pressure in the steam generators was 40 psig. Operations personnel were preparing to perform partial stroking of the main steam isolation valves (MSIV), as a prerequisite to entry into Hot Standby (Operating Mode 3). The initial conditions for the surveillance testing required the MSIVs to be fully open. The "A" MSIV, 2MSS\*AOV101A, was to be stroked first, however the valve was shut. A normal operating procedure is available to guide the operator in the steps required to pressurize the steam header (opening the bypass valve around the MSIV to reduce the pressure differential and increase steam header pressure prior to opening the MSIV), however this procedure was not consulted. As the operator opened the MSIV, to a depressurized steam header, the increased steam flow required to pressurize the steam header resulted in a "swell" of the steam generator level in the "A" steam generator. The level increased from 34% to greater than 75% causing a Feedwater Isolation Signal (FWI), at 0442 hours. The FWI signal caused the closure of feedwater containment isolation valves. All other components actuated by the FWI isolation signal (main feedwater regulating valves, bypass feedwater regulating valves, startup feedwater pump and main feedwater pumps) were not in service and therefore did not actuate. The Nuclear Regulatory Commission was notified of this Engineered Safety Features actuation at 0620 hours.

CAUSE OF THE EVENT

The cause for this event was operator error. The operator, while attempting to establish the initial conditions for the test (MSIV fully open), failed to equalize pressure across the valve prior to opening the MSIV using the normal operating procedure. This resulted in increased steam flow which pressurized the steam header, resulting in a "swell" of the steam generator level in the "A" steam generator. Specific procedural guidance, for pressurizing the steam header if the MSIVs were not open, was not in the surveillance test.

CORRECTIVE ACTIONS

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

1. The FWI signal was reset and the feedwater containment isolation valves were reopened at 0448 hours.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, 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 2	0 5 0 0 0 4 1 2	9 0 — 0 2 1 — 0 0	0 3 OF 0 3

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

2. The surveillance tests for partial stroking of the MSIVs will be revised to include guidance for opening the MSIVs to a depressurized steam header.
3. The involved operator was counseled regarding the actions performed during this event.
4. This event will be covered at a future Retraining session with all Unit 1 and 2 Operations personnel emphasizing the requirements for use of procedures.
5. An engineering evaluation has been performed to address the potential for piping damage subsequent to this event. No concerns were identified.

REPORTABILITY

This event was reported to the Nuclear Regulatory Commission at 0620 hours in accordance with 10CFR50.72.b.2.ii. This written report is being issued in accordance with 10CFR50.73.a.2.iv, an event involving an Engineered Safety Features (ESF) system actuation.

PREVIOUS OCCURRENCES

The following similar feedwater isolation events have been previously reported for Unit 2. A review of these events showed that none of these events were caused by a failure to use procedures.

LER 88-011-00 "Automatic Feedwater Isolation"

LER 89-015-00 "Feedwater Isolation During Testing Of Auxiliary Feedwater Pump"

LER 89-020-00 "Inadvertent Start Of Motor Driven Auxiliary Feedwater Pumps"