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July 24, 1989
ND3MNO:1940

Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
LER 89-019-00

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 89-019-00, 10 CFR 50.73.a.2.iv, "Auxiliary Feedwater Pump Actuation Due to a Low-Low Steam Generator Level".

T. P. Noonan
General Manager
Nuclear Operations

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Attachment

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Beaver Valley Power Station, Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 4 1 2				PAGE (3) 1 OF 0 3		
TITLE (4) Auxiliary Feedwater Pump Actuation Due to a Low-Low Steam Generator Level																
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 6	2 2	8 9	8 9	0 1	9	0 0	0 7	2 4	8 9	N/A				0 5 0 0 0		
OPERATING MODE (9) 3			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)													
POWER LEVEL (10) 0 0 0		20.402(b)				20.406(c)				<input checked="" type="checkbox"/> 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)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)						
		20.406(a)(1)(iv)				50.73(a)(2)(ii)				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 Thomas P. Noonan, General Manager										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	X X	X X X X	X X X X	N												
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												<input checked="" type="checkbox"/> NO				

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

On 6/22/89, the Unit was in Hot Standby with the Reactor Trip breakers open following a shutdown which had been initiated due to a tube leak in the "C" Steam Generator. A cooldown to Cold Shutdown was in progress. At 0043 hours, "B" Steam Generator level decreased to its Low-Low Setpoint. This caused the Steam Driven Auxiliary Feedwater Pump to auto-start and supply additional Feedwater to the Steam Generators. The level in the "B" Steam Generator increased and cleared its Low-Low Setpoint within 2 minutes. Operators then shutdown Steam Driven Auxiliary Feedwater Pump and continued to increase the Steam Generator level using the normal Feedwater system. This event was the result of the operating shift performing numerous concurrent tasks while manually controlling Steam Generator levels to prevent Reactor Coolant System temperature variations during a Steam Generator Leakage test. This event will be reviewed with all Licensed Operators during a Licensed Retraining Session. There were no safety implications due to this event. An Auxiliary Feedwater System actuation due to a Low-Low Steam Generator level is bounded by UFSAR Analysis, Section 15.2.7, "Loss of Normal Feedwater Flow".

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

FACILITY NAME (1) Beaver Valley Power Station, Unit 2	DOCKET NUMBER (2) 0500041289-019-01002 OF 03	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

DESCRIPTION OF EVENT

On 6/22/89, the Unit was in Hot Standby (Operating Mode 3) with its Reactor Trip Breakers open. A plant cooldown to Cold Shutdown (Operating Mode 5) in progress due to a tube leak in the "C" Steam Generator. During this cooldown, the "B" Steam Generator water level decreased to its Low-Low level setpoint. This initiated an automatic actuation signal to the Steam Driven Auxiliary Feedwater Pump. The pump started as designed and supplied Auxiliary Feedwater to all three Steam Generators. The "B" Steam Generator level increased and cleared its Low-Low level setpoint within 2 minutes. Operators then secured the Auxiliary Feedwater Pump and controlled level in the "B" Steam Generator using the normal Feedwater system.

CAUSE OF EVENT

This event resulted from the operating crew performing numerous concurrent tasks (Reactor Coolant System leak rate calculation surveillance test and independent verification of Shutdown Margin) while manually controlling Steam Generator levels. Due to the low Steam Flow conditions, Steam Generator levels were changing slowly and did not require frequent operator action to be maintained within their normal operating band. The operators had been maintaining Steam Generator Level control in manual in order to prevent Reactor Coolant System variations that would introduce error in the ongoing leak rate surveillance test. The other tasks distracted the operators and resulted in their not sufficiently monitoring the Steam Generator levels.

Beaver Valley Unit 2 has experienced indication fluctuations in Steam Generator levels while operating above 45% Power. These fluctuations are due to condensate buildup in the instrument line between the Steam Generator level instrument upper reference leg tap and the reference leg condensing pot. This results in errors between actual and indicated Steam Generator levels. Due to these fluctuations during Power Operation, the Steam Generator Low-Low setpoint was conservatively being maintained at greater than its normal value. This setpoint is normally reduced to its regular value once the Unit is below 45% Power. During this event, the setpoint had not yet been changed to its normal value due to time constraints. This resulted in the Steam Generator Level Deviation Alarm setpoint being lower than the Low-Low level setpoint, rendering this alarm unavailable to prompt the operators.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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	8 9	— 0 1 9	— 0 0	0 3	OF	0 3

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

CORRECTIVE ACTIONS

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

1. Operations personnel stabilized Steam Generator levels and shutdown the Auxiliary Feedwater pump.
2. This event will be reviewed by all Licensed Operators during a Licensed Retraining session, emphasizing the need for attention to Steam Generator level response during low Steam Flow conditions and the need for effective and efficient use of available manpower. This training will also review the Steam Generator Level Alarm and Low-Low setpoints during various Power Levels.

SAFETY IMPLICATIONS

There were no safety implications due to this event. The Auxiliary Feedwater System functioned as designed, actuating on a Low-Low Steam Generator level to supply additional Feedwater to the Steam Generators. An Auxiliary Feedwater System actuation due to a Low-Low Steam Generator level is bounded by UFSAR Analysis, Section 15.2.7, "Loss of Normal Feedwater Flow".

While the Steam Driven Auxiliary Feedwater Pump was in operation, its exhaust was classified as a radioactive release, due to the aforementioned Steam Generator tube leak. This was a controlled release and was monitored by radiation monitor 2MSS-RQ-101C. Calculations determined this release was less than 0.12% of Technical Specification limits.

PREVIOUS OCCURRENCES

Licensee Event Reports: 87-003-00, 87-005-00, 87-014-00, 87-015-00, 87-034-00, 87-035-00, all discussed events involving a Low-Low Steam Generator level.