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March 12, 1993
ND3MNO:3427

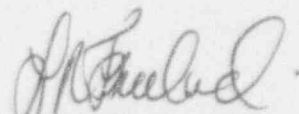
Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, Licensee No. DPR-66
LER 93-001-00

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 93-001-00, 10 CFR 50.73.a.2.ii.B, "Condition Outside Design Basis - Main Steam Isolation Valve Closure not Considered in Original Design."


L. R. Freeland
General Manager
Nuclear Operations

DJM/sl

Attachment

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cc: Mr. T. T. Martin, Regional Administrator
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), 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 1

DOCKET NUMBER (2)

0 5 0 0 0 3 3 4 1 OF 0 3

PAGE (3)

TITLE (4)

Condition Outside Design Basis - Main Steam Isolation Valve Closure Not Considered in Original Design

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	2	1	2	9	3	9	3	0	0	1	0	5	0	0	0
0	2	1	2	9	3	9	3	0	0	0	3	1	2	9	3

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)									
POWER LEVEL (10)	0 9 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)						
		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)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)						
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(vii)(A)							
		20.405(a)(1)(iv)	X 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)(x)							

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
L. R. Freeland, General Manager Nuclear Operations	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
B	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
X					

ABSTRACT (Limit to 1400 spaces. (x) approximately fifteen single space typewritten lines) (16)

Unit One was performing an engineering analysis to support the possibility of increased steam generator tube plugging during the upcoming refueling outage. During this study, it was discovered that an inadvertent main steam isolation valve (MSIV) closure would generate a pressure transient which would result in increased loading on the main steam system piping and supports. This transient was not previously considered as a design condition for the plant. An assessment of the increased loading has shown that the established design stress limits could be exceeded, resulting in the plant being outside of its design basis. An operability assessment supports continued operation until the upcoming refueling outage. This assessment utilizes ASME Section III Appendix F faulted allowable values in accordance with Generic Letter (GL) 91-18. In addition, the plant has previously experienced inadvertent MSIV closures with no defects to the piping or supports noted. A detailed reanalysis of the steam line loading is in progress to determine the actions necessary to meet the design allowable stress limits.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-530), 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 1	DOCKET NUMBER (2) 0 5 0 0 0 3 3 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 3	0 0 1	0 0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

Unit One was performing an engineering analysis to support the possibility of increased steam generator tube plugging during the upcoming ninth refueling outage. The effect of increased steam flow in the non-affected steam generators was being evaluated. During this study, it was discovered that under current operating conditions an inadvertent main steam isolation valve (MSIV) closure would generate a pressure transient which would result in increased loading on the main steam system piping and supports. This transient was not previously considered as a design condition for the plant. An assessment of the increased loading has shown that the established design stress limits could be exceeded, resulting in the plant being outside of its design basis. The original design only considered MSIV closure following a turbine trip; it was believed that the turbine throttle valves would close before the MSIVs, precluding the necessity of evaluating a pressure transient caused by MSIV closure. Detailed analysis of the valve closure time has shown otherwise. An operability assessment supports continued operation until the upcoming refueling outage scheduled to begin March 26, 1993. This assessment utilizes ASME Section III Appendix F faulted allowable values in accordance with Generic Letter (GL) 91-18. In addition, the plant has previously experienced inadvertent MSIV closures with no defects to the piping or supports observed.

CAUSE OF THE EVENT

The original design analysis did not consider the pressure transient generated due to an MSIV closure when analyzing the stresses on the main steam piping.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

TEXT (If more space is required, use additional NRC Form 365A's) (17)

CORRECTIVE ACTIONS

The following corrective actions have been or will be taken:

1. An operability assessment has been completed which supports plant operation until the upcoming refueling outage scheduled to begin March 26, 1993. This assessment applies ASME Section III Appendix F criteria in accordance with GL 91-18 and demonstrates that the stresses are within the faulted allowable values.
2. A review of the examinations and inspections performed on the main steam lines and supports subsequent to the inadvertent closures in 1990 was performed. This review revealed that no deficiencies were observed.
3. A detailed reanalysis of steam line loading is in progress to determine the actions necessary to meet the design allowable stress limits. Any actions resulting from this analysis will be implemented prior to the startup from the refueling outage.

REPORTABILITY

This report is being submitted in accordance with 10CFR50.73.a.2.ii.B as a condition that was outside of the design basis of the plant.

SAFETY IMPLICATIONS

The safety implications due to this event are minor. Although the loads which could be experienced by some of the steam line supports exceeded the limits established in the UFSAR, the system will still perform its intended function. ASME Section III Appendix F faulted allowable values were utilized for this determination, consistent with Generic Letter 91-18. The plant has previously experienced inadvertent MSIV closures (ref: LER 90-015 and 90-019) with no defects to the piping or supports observed.

SIMILAR EVENTS

There have been no previous reportable events similar to this.