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April 10, 1991  
ND3MNO:3122

Beaver Valley Power Station, Unit No. 1  
Docket No. 50-334, License No. DPR-55  
LER 91-008-00

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 91-008-00, 10 CFR 50.73.a.2.i.B, "Underrated Motor Termination Leads on Low Head Safety Injection Pump".

Very truly yours,

*K.L. Ostrowski for*

T. P. Noonan  
General Manager  
Nuclear Operations

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Attachment

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April 10, 1991

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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)

Underrated Motor Termination Leads on Low Head Safety Injection Pump

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	3	1	1	9	1	9	1	0	0	8	0	0	0	4	1	0	9	1	N/A	0	5	0	0	0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)									
1		20.402(b)		20.406(c)		50.73(a)(2)(iv)		73.71(b)			
		20.406(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)			
POWER LEVEL (10)	1 0 0	20.406(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
		20.406(a)(1)(iii)	X	50.73(a)(2)(ii)		50.73(a)(2)(vii)(A)					
		20.406(a)(1)(iv)		50.73(a)(2)(iii)		50.73(a)(2)(viii)(B)					
		20.406(a)(1)(v)		50.73(a)(2)(iv)		50.73(a)(2)(ix)					

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 NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs
A	E	B	X	X	X	X	X	X	Y

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)

X NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

On 3/11/91, during preventive maintenance, minor chaffing damage was found on the B train low head safety injection pump motor leads. Maintenance supervision also found an underrated motor termination installed. The underrated termination showed no signs of insulation breakdown but was rated for 1 KV as opposed to the required 4 KV. An appropriately rated termination was installed, the minor chaffing damage was repaired, and the motor was returned to service on 3/13/91. This underrated termination was apparently installed in June of 1986 when the motor was removed to repair a grease seal. The cause for this event was that the work request for this repair did not specify the use of procedures that addressed proper termination methods. A review of the maintenance history for all environmentally qualified motors was performed to identify any lead termination work. All termination work performed was satisfactory. There were no safety implications to the public as a result of this event. The A train low head safety injection pump motor terminations were inspected and found to be of the correct rating.

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-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 9 1	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
			0 0 8	0 0 0	0 2	OF 0 3

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

DESCRIPTION OF EVENT

On 3/11/91, during preventative maintenance, an underrated motor termination was found on the train B low head safety injection pump. This termination was made up of 3 layers of WCSF Raychem Heat Shrink Tubing, rated only for 1000 volt applications. All environmental requirements with regard to radiation, temperature and humidity were met. Although three layers were used and the termination was in good condition, it was determined that the termination was inadequate. Upon consultation with the engineering department, an approved 4KV Kerite termination repair was made, the termination insulation was satisfactorily tested, and the pump was returned to service on 3/13/91.

CAUSE OF EVENT

Upon further investigation, it was determined that the underrated splice was installed between June 20 and 24, 1986 when the motor was removed to repair a bad grease seal. The work instructions for the grease seal repair did not specify the use of approved procedures which provided proper motor termination instructions.

CORRECTIVE ACTIONS

Since the time of the incorrect termination being installed, the station has upgraded its maintenance work control program to include multiple levels of review, including review for environmental and other requirements. These upgrades have included the concerns of NRC IE Notice 86-53, "Improper Installation of Heat Shrink Tubing". Additionally, the following corrective actions have been taken as a result of this event:

1. A properly rated 4KV termination was installed on the train B low head safety injection pump motor.
2. The train A low head safety injection pump motor was inspected and its maintenance history was reviewed. It was determined that properly rated motor terminations were in place.
3. A review of the maintenance history for all safety related motors on the environmental qualification list was performed for any work that would have affected motor terminations. No deficiencies were noted.
4. Maintenance training programs have been implemented addressing proper motor termination methods.
5. Electrical Maintenance Supervision has determined that unit 2 is not affected by this event.



LICENSEE EVENT REPORT (LER)  
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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 1	0 0 8	0 0	0 3	OF	0 3

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

PREVIOUS OCCURRENCES

Beaver Valley has previously reported one similar event:

Unit 1 LER 79-24      This event involved the discovery of 44 unqualified ASCO valves installed inside reactor containment as a result of IE Bulletin 79-01A investigation.

REPORTABILITY

This written report is being submitted in accordance with 10CFR50.73.a.2.i.B, as an event or condition prohibited by Technical Specifications. The underrated motor termination placed the low head safety injection pump in a degraded condition. This condition had existed since 1986.

SAFETY IMPLICATIONS

There were no safety implications to the public as a result of this event. The train A low head safety injection pump terminations were verified to be properly rated. The B train motor was in question in that it may have been unable to perform its intended function due to the possible failure of the underrated motor termination. However, the pump did pass all technical specification required surveillance tests during the period in which the under rated termination was installed. In addition, insulation tests performed on the motor during this same time were also satisfactory.