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July 8, 1991
ND3MNO:3158

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
LER 91-018-00

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 91-018-00, 10 CFR 50.73 a.2.i.B, "Auxiliary Feedwater Pump Flow Indicating Switches As-Found Configuration not Supported by Seismic Analysis".

Very truly yours,

T. P. Noonan
General Manager
Nuclear Operations

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Attachment

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July 8, 1991)

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ESTIMATE BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 80.0 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.

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Auxiliary Feedwater Pump Flow Indicating Switches As-Found Configuration not Supported by Seismic Analysis

LISCENSEE CONTACT FOR THIS LER (12)

TELEPHONE NUMBER _____

4, 1, 2, 6, 4, 3, —, 1, 2, 5, 8

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT 112

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO				

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

NRC Form 366 (6-89)

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (if more space is required, use additional Form 366A's) (17)

DESCRIPTION OF EVENT

On 6/6/91, with the unit in cold shutdown (Mode 5), for the eighth refueling outage, an engineering field inspection of flow indicating switches FIS-FW-151A, 151B, and 152 was being performed as part of a seismic qualification review for spare parts. These switches, located on each auxiliary feedwater (AFW) pump suction, provide proper recirculation flow for the motor and steam driven AFW pumps by controlling solenoid operated recirculation flow control valves. The inspection revealed that terminal boxes, weighing approximately two pounds, were directly attached to the switches. This configuration conflicted with the seismic qualification reports which document the switches as qualified with an attached terminal box weighing approximately three-quarters of a pound or with no attachments.

CAUSE OF EVENT

An investigation revealed that the switches and terminal boxes were installed in 1980 as part of a design change (DCP 130) to provide increased recirculation flow for the AFW pumps during periods of operation when minimal AFW flow would be demanded. The seismic qualification reports were not provided at the time of installation, therefore personnel making the installation were not cognizant of the required seismic configuration.

CORRECTIVE ACTIONS

A design change (DCP 1747) relocating the terminal boxes off of the switch housing was completed on 7/3/91, prior to entry into Hot Standby (Mode 3). This returned the flow indicating switch configuration to compliance with the seismic qualification documents.

PREVIOUS OCCURRENCES

There have been no previously reportable events involving seismic concerns with the auxiliary feedwater system.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)	PAGE (3)
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

REPORTABILITY

This report is being submitted in accordance with 10 CFR 50.73.a.2.i.B, as an event or condition prohibited by Technical Specifications. Technical Specification 3.7.1.2 states that at least three steam generator auxiliary feedwater pumps and associated flow paths shall be operable in Modes 1, 2, and 3. In the absence of seismic analyses supporting the "as-found" configuration, the operation of the auxiliary feedwater system was potentially degraded since installation of the design change in 1980.

SAFETY IMPLICATIONS

As a result of the installation, the operation of the AFW recirculation flow indicating switches, and hence the valves, may have been degraded during a seismic event. Any one of the three AFW pumps is capable of delivering 100 percent of design required flow to the steam generators. If all three AFW recirculation valves failed full open, at least two AFW pump failures would have to occur before flow delivered to the steam generators would be less than the assumed design flow. Successful periodic surveillance testing was performed on all three AFW pump during the time that the seismically unqualified design was installed. Had the recirculation valves failed fully closed, the long term operability of the auxiliary feedwater pumps could have been degraded; however, such degraded conditions would only occur after the high initial demand for auxiliary feedwater had been satisfied. In addition, indications of AFW system performance (pump amps, flow, and recirculation valve position) are provided in the control room enabling operators to monitor system performance and take appropriate actions if required or directed by Emergency Operating Procedures.