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November 1, 1991  
ND3MNO:3208

Beaver Valley Power Station, Unit No. 1  
Docket No. 50-334, License No. DPR-66  
LER 91-028-00

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 91-028-00, 10 CFR 50.73.a.2.i.B, "Inoperable Overpressure Protection Due to Inadequate Seismic Qualification".

Very truly yours,

T. P. Noonan  
General Manager  
Nuclear Operations

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Attachment

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PDR ADOCK 05000334  
S PDR

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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: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-330) 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 1

DOCKET NUMBER (2): 0 5 0 0 0 3 3 4 1 OF 0 3

PAGE (3): 1 OF 0 3

TITLE (4): Inoperable Overpressure Protection Due to Inadequate Seismic Qualification

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 NAME(S)										
1	0	2	9	1	9	1	0	2	8	0	0	1	1	0	1	9	1	N/A	DOCKET NUMBER(S): 0 5 0 0 0 0

OPERATING MODE (9): 1

POWER LEVEL (10): 1 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)

20.402(b)	20.406(a)	50.73(a)(2)(iv)	73.71(b)
20.406(a)(1)(iii)	50.36(a)(1)	50.73(a)(2)(v)	73.71(c)
20.406(a)(1)(iv)	50.36(a)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
20.406(a)(1)(v)	X 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)	
20.406(a)(1)(vi)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)	
20.406(a)(1)(vii)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12): T.P. Noonan, General Manager Nuclear Operations

TELEPHONE NUMBER: 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 NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS
B	J	G	X X X	X X X X	N				

SUPPLEMENTAL REPORT EXPECTED (14):

YES (If yes, complete EXPECTED SUBMISSION DATE):  NO:  X

EXPECTED SUBMISSION DATE (15):

MONTH	DAY	YEAR

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

On 10/2/91, with the unit at 100 percent power, the Overpressure Protection System (OPPS) was declared inoperable due to inadequate seismic qualification. Upon reviewing a vendor supplied 10CFR21 report, the station determined that relays associated with the OPPS, were installed in Auxiliary Relay Racks (ARRs) which are not seismically qualified. Since the OPPS, utilizing the power operated relief valves (PORV), is a seismic, Category I system, it was declared inoperable. This report is being submitted in accordance with 10CFR50.73.a.2.i.B, as a condition prohibited by Technical Specifications. The OPPS had been assumed operable, during all applicable modes, since it's original installation. This resulted in several instances when the OPPS function supplied by the PORVs was potentially inoperable. The OPPS is required to be in service whenever the Reactor Coolant System (RCS) temperature is at or below 292 degrees Fahrenheit. On 10/23/91 the unit was shutdown to Cold Shutdown for unrelated reasons. While in Cold Shutdown, a modification which utilized spare relays in adjacent, seismically qualified, Auxiliary Safeguards Cabinets was completed for the susceptible relays. On 10/26/91, following completion of the design change, the OPPS was declared operable.

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 (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 1	DOCKET NUMBER (2)  0 5 0 0 0 3 3 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 1	0 2 8	0 0	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 360A's. (17)

DESCRIPTION OF EVENT

On 6/24/91, Westinghouse Electric Corporation issued a report, pursuant to the requirements of 10CFR21 (Westinghouse letter NS-NRC-91-3603), identifying a potential safety concern involving non-safety related Auxiliary Relay Racks (ARRs) that may incorporate safety related functions. The ARR's are not seismically qualified. During Beaver Valley's evaluation of the report, it was determined that the design change (DCP 137) which installed the OPPS at Beaver Valley Unit 1 in 1977, utilized relays in the ARR's for the signal that initiates the opening of the Power Operated Relief Valves (PORVs). The PORVs that are required to open for overpressure protection are PCV-RC-455C and 455D. A review of the station's licensing basis determined that the Nuclear Regulatory Commission criteria for overpressure protection systems, requires the design to function during an Operational Basis Earthquake (OBE). On 10/2/91, following this review, the PORV portion of the OPPS was declared inoperable and the alternate method of supplying overpressure protection, as outlined in the Technical Specification 3.4.9.3, was reviewed. Technical Specification 3.4.9.3 requires the OPPS to be operable whenever the Reactor Coolant System (RCS) temperature is at or below 292 degrees Fahrenheit.

CAUSE OF EVENT

Based on a review of DCP 137, the ARR's were assumed to be seismically qualified due to the original purchase order from Westinghouse for the ARR's being part of the Solid State Protection System (SSPS) package. The ARR's are similar to the SSPS racks which are seismically qualified. The documentation received with the package did not clearly identify which cabinets had been seismically tested and qualified. In addition, the design and engineering for installation of OPPS was performed by the Architect/Engineer (Stone & Webster) without Westinghouse involvement.

CORRECTIVE ACTIONS

On 10/23/91, the station was shutdown to Cold Shutdown, for unrelated reasons. During the cooldown, with the PORV portion of OPPS functional but inoperable, the alternate method of supplying overpressure protection was instituted in accordance with Technical Specification 3.4.9.3. Technical Specification 3.4.9.3 requires the RCS to be depressurized and vented through a 3.14 square inch vent within 12 hours and maintained vented until both PORVs are restored to an operable status. This condition was satisfied by venting to the Pressurizer Relief Tank (PRT) and by blocking open PCV-RC-455C and 455D.

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-830), 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 1	DOCKET NUMBER (2)  0 5 0 0 0 3 3 4	LER NUMBER (6)			PAGE (3)	
		YEAR 9 1	SEQUENTIAL NUMBER 0 2 8	REVISION NUMBER 0 0	0 3 OF 0 3	

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

While in Cold Shutdown, a design change (DCP 1800) utilizing spare relays in adjacent, seismically qualified, Auxiliary Safeguards Cabinets was completed. The modification involved disconnecting cables from the relays in the ARRs and connecting them to the relays in the Auxiliary Safeguards Cabinets. On 10/26/91 with the unit in Cold Shutdown, following completion of the design change and satisfactory testing, the PORV portion of OPSS was declared operable.

PREVIOUS OCCURRENCES

There have been no previous reportable events involving seismic concerns with the Overpressure Protection System (OPSS) or with the Power Operated Relief Valves (PORVs).

REPORTABILITY

This report is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B) as a potential condition prohibited by the plant's Technical Specifications. The PORV portion of OPSS had been assumed operable, during all applicable modes, since it's original installation. This resulted in several instances when the alternate method of overpressure protection was not used nor the technical specification action statement entered while the PORVs were supplying overpressure protection. This was because the PORV portion of OPSS was assumed operable. Technical Specification 3.4.9.3 is applicable when the temperature of one or more of the non-isolated RCS cold legs is less than or equal to 292 degrees Fahrenheit.

SAFETY IMPLICATIONS

Although the OPSS was not seismically qualified, due to the relays being located in the ARRs, the function of OPSS was not hindered. The basic design of the ARRs is similar to other cabinets which are seismically qualified (as stated in the Westinghouse 10CFR21 report). The safety related functions reside in separate train designated ARRs and therefore redundancy does exist with respect to cabinets and components. Therefore the seismic concern did not prevent the OPSS from performing its intended function at Beaver Valley Power Station. Additionally, Beaver Valley Unit 1 has not experienced any Design Basis or Operational Basis Earthquakes, which may have compromised OPSS operation.