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April 12, 1993
ND3MNO:3444

Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, Licensee No. NPF-73
LER 93-006-00

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 93-006-00, 10 CFR 50.73.a.2.iv, "Engineered Safety Feature Components Actuation Due to De-energization of the 1G 4KV Bus."

F. D. Schnetzer for LRF

L. R. Freeland
General Manager
Nuclear Operations

DAW/sl

Attachment

150005

IE22 1/1

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Beaver Valley Power Station Unit 2	0 5 0 0 0 4 1 2	1 OF 0 3

TITLE (4)

Engineered Safety Feature Components Actuation Due to De-energization of the 1G 4KV Bus.

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)
									N/A	0 5 0 0 0
0 3	1 2	9 3	9 3	0 0 6	0 0	0 4	1 2	9 3		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
	1	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)	1 0 0	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)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		
		20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(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
	AREA CODE
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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	W I	X X X X	X X X X	N							
X	V F	X X X X	X X X X	N							

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On 3/12/93, an automatic closure of the Steam Generator Blowdown Outside Containment isolation valves and an automatic realignment of the contiguous area ventilation from unfiltered to filtered exhaust occured during a test of the Emergency Response Facility Diesel Generator. The diesel generator was connected to the 1G 4KV bus and loaded to approximately 300 KW. While the operator was adjusting the power factor, the diesel generator output breaker tripped on ground overcurrent. The normal supply to the 1G 4KV bus also tripped, leaving the bus momentarily de-energized and locked out. This caused the 480 Volt busses J and K, and L and M, to automatically tie together. The voltage disturbance then caused several radiation monitors to momentarily go into high alarm, resulting in the steam generator blowdown isolation and ventilation realignment. This event is categorized as an unplanned automatic repositioning of Engineered Safety Feature components. There were no safety implications as a result of this event. The diesel generator was shut down and normal power was restored to the 1G 4KV bus. The radiation monitors were reset. The Steam Generator Blowdown system was restored to its normal configuration and the contiguous area ventilation was restored to its normal exhaust path.

DESCRIPTION OF EVENT

On 3/12/93, station operators were performing an operations surveillance test on the Emergency Response Facility (ERF) Diesel Generator (RG-EG-1). The diesel generator was connected to the 1G 4KV bus and loaded to approximately 300 KW. The normal power supply for the 1G 4KV bus is from the 138KV bus No. 2. As the operator was adjusting the power factor, the diesel generator output breaker tripped on ground overcurrent. The normal supply to the 1G 4KV bus also tripped on ground overcurrent, leaving the bus momentarily de-energized and locked out. This caused the 480 Volt busses J and K, and L and M, to automatically tie together. The voltage disturbance caused an electrical spike on several radiation monitors (the Supplemental Leak Collection Vent, Steam Generator Blowdown Sample, and the Waste Gas Storage Vault monitors). The Steam Generator Blowdown Sample monitor electrical spike caused the Steam Generator Blowdown Outside Containment isolation valves to automatically close. The Leak Collection Ventilation monitor electrical spike caused the ventilation of the contiguous areas to realign from unfiltered to filtered exhaust. The repositioning of the Steam Generator Outside Containment isolation valves and the contiguous area ventilation dampers is categorized as an unplanned operation of Engineered Safety Feature components. There were no safety implications as a result of this event. The Ground Fault Relay reset, indicating there were no grounds present. The normal power supply was restored to the 1G 4KV bus and the diesel generator was shut down. The radiation monitors were reset. The Steam Generator Blowdown system was restored to its normal configuration and the contiguous area ventilation was restored to its normal exhaust path.

CAUSE OF EVENT

The cause of this event is operator difficulty due to the high sensitivity of the diesel generator controls while the diesel generator is lightly loaded. While making adjustments, the changing power factor and possible generator pole slippage resulted in a ground overcurrent being sensed. This caused the diesel generator output breaker and the 1G 4KV normal power supply breaker to trip open.

CORRECTIVE ACTIONS

The following corrective actions have been or will be taken:

1) To minimize the effects of a diesel generator trip during testing, a procedure revision was issued to transfer the power supply of certain loads to the other train of power while the diesel generator is being tested.

2) To improve operator awareness of the control sensitivity, a procedure revision was issued providing more detailed instructions on changing the power factor on the diesel generator and the effects it may have on the system.

3) The Relay Group performed a calibration check of the Ground Fault Relay and found it to be within specification.

4) A Human Performance Enhancement System (HPES) evaluation is being performed on this event to evaluate the root cause of the man - machine interface problems.

REPORTABILITY

This event was reported to the Nuclear regulatory Commission at 1150 hours on 3/12/93, in accordance with 10CFR50.72.b.2.ii, as an event involving an unplanned Engineered Safety Feature component actuation. This written report is being submitted in accordance with 10CFR50.73.a.2.iv, as an event involving an Engineered Safety Feature component actuation.

SAFETY IMPLICATIONS

There were no safety implications as a result of this event. All systems were returned to their normal operating conditions and alignments shortly after the event. There were no adverse effects on the plant or its operation.

PREVIOUS OCCURRENCES

There are previously reported incidents of unplanned Steam Generator Blowdown system isolations and Contiguous Area Ventilation realignments, but none were directly attributable to problems that occured while operating the Emergency Response Facility Diesel Generator.