



Nuclear Group
P.O. Box 4
Scranton, PA 15077-0004

Telephone (412) 393-6000

June 1, 1992
ND3MNO:3309

Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
LER 92-006-00

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 92-006-00, 10 CFR 50.73.a.2.iv, "Inadvertent Safety Injection During Cold Shutdown Due to Inadequate Work Request Review".

Very truly yours,

T. P. Noonan
General Manager
Nuclear Operations

JGT/sl

Attachment

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June 1, 1992
ND3MNO:3309
Page two

cc: Mr. T. T. Martin, Regional Administrator
United States Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

C. A. Roteck, Ohio Edison
76 S. Main Street
Akron, OH 44308

Mr. A. DeAgazio, BVPS Licensing Project Manager
United States Nuclear Regulatory Commission
Washington, DC 20555

Larry Roszbach, Nuclear Regulatory Commission,
BVPS Senior Resident Inspector

Larry Beck
Centerior Energy
6200 Oak Tree Blvd.
Independence, Ohio 44101-4661

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, GA 30339

G. E. Muckle,
Factory Mutual Engineering
680 Anderson Drive #BLD10
Pittsburgh, PA 15220-2773

Mr. Richard Janati
Department of Environmental Resources
P. O. Box 2063
16th Floor, Fulton Building
Harrisburg, PA 17120

Director, Safety Evaluation & Control
Virginia Electric & Power Co.
P.O. Box 26666
One James River Plaza
Richmond, VA 23261

W. Hartley
Virginia Power Company
5000 Dominion Blvd.
2SW Glenn Allen, VA 23060

J. M. Riddle
Halliburton NUS
Foster Plaza 7
661 Anderson Drive
Pittsburgh, PA 15220

June 1, 1992

ND3MNO:3309

Page three

Bill Wegner, Consultant
23 Woodlawn Terrace
Fredricksburg, VA 22404

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (FASB), 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 2

DOCKET NUMBER (2)

0 5 0 0 6 0 4 1 2 1 OF 0 5

PAGE 1

TITLE (4)

Inadvertent Safety Injection During Cold Shutdown Due to Inadequate Work Request Review

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	5	0	1	9	2	9	2	0	0	6	0	0	0	0	0	0	
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5.106a, 4. one or more of the following (11):																	
OPERATING MODE (9)			20.402(b)			20.405(a)			X			NO. 73(a)(2)(iv)			73.71(b)		
POWER LEVEL (10)			20.406(a)(1)(iii)			50.38(a)(1)						NO. 73(a)(2)(iv)			73.71(c)		
0			0			0						NO. 73(a)(2)(iv)			OTHER (Specify in Abstract: Date and in Text: NRC Form 300a)		
			20.406(a)(1)(iii)			50.38(a)(2)						NO. 73(a)(2)(iv)					
			20.405(a)(1)(iv)			50.73(a)(2)(ii)						NO. 73(a)(2)(iv)					
			20.405(a)(1)(iv)			50.73(a)(2)(ii)						NO. 73(a)(2)(iv)					
			20.406(a)(1)(iv)			50.73(a)(2)(ii)						NO. 73(a)(2)(iv)					

LICENSEE CONTACT FOR THIS LER (12)

NAME

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 NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
A	E	F	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
<input checked="" type="checkbox"/>	<input type="checkbox"/>				

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

On 5/01/92, the Unit was in Cold Shutdown for a refueling outage. The Solid State Protection System was in service to allow testing of the system by Instrument and Control (I&C) personnel. I&C personnel were performing a surveillance on the protection channel I Pressurizer (PZR) Pressure, at 1315 hours, which resulted in the bistables for this channel being in a tripped condition. At 1325 hours, I&C personnel requested operations support to repair a problem on the No. 3 120VAC Vital Bus Regulator. During these repair activities, normal power to the Number 3 120VAC Vital Bus was de-energized at 1356 hours. The loss of power resulted in the removal of a low PZR pressure safety injection block signal and a loss of protection channel III PZR Pressure, tripping the bistables for this channel. This resulted in a Safety Injection (SI) signal actuation. All Engineered Safety Features (ESF) components actuated as designed. Operations personnel reset the SI signal and restored the ESF components to their pre-actuation positions. The cause for this event was an inadequate review of the work request for the No. 3 120VAC Vital Bus Regulator, which resulted in the deenergization of this bus. There were no safety implications as a result of this event. All ESF components actuated as designed. No reactor coolant system overpressure condition occurred.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER REGION: 72 COPY WITH THIS INFORMATION COLLECTION: REQUEST 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BR., CH (P-30), 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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Beaver Valley Power Station Unit 2	0500041292	—	006	—	00	02	005

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

DESCRIPTION OF EVENT

On 5/01/92, the Unit was in Cold Shutdown for a refueling outage. The Solid State Protection System (SSPS) was in service to allow testing of the system by Instrument and Control (I&C) personnel and to perform other surveillance tests. I&C personnel were performing a surveillance on the protection channel I Pressurizer Pressure, at 1315 hours, which resulted in the bistables for this channel being in a tripped condition. At 1325 hours, I&C personnel requested operations support to replace a fuse on the Regulator for the No. 3 120VAC Vital Bus. The regulator functions to supply an alternate source of AC power to the Vital Bus when the inverter is out-of-service. The work request referenced the No.3 120VAC Vital Bus, however, the instructions on the work request involved the Regulator. The operator supporting the work request was unfamiliar with the fuse which was to be replaced and the circuit breakers used to deenergize the regulator, therefore the operator returned to the control room for additional guidance, prior to I&C personnel working on the regulator. The Nuclear Shift Supervisor (NSS) discussed the nature of the work request and reviewed procedures involved with de-energizing the No.3 120VAC Vital Bus Inverter with the operator. The NSS was unsure of the fuse location and could not locate the electrical drawing detailing the fuse and circuit breakers listed in the work request instructions. It was decided to clear the inverter, then proceed with the work instructions on the work request. After de-energizing the Inverter, placing the inverter power supply to its alternate source, the regulator, the operator opened the circuit breakers listed in the work instructions. This resulted in de-energizing the No. 3 120VAC Vital Bus, at 1356 hours, as the regulator is the alternate power supply for the Inverter.

The loss of power resulted in the removal of a low pressurizer pressure safety injection block signal and a loss of protection channel III Pressurizer Pressure, tripping the bistables for this channel. The Low Pressurizer Pressure Safety Injection Signal is derived from a two-of-three logic coincidence. Following tripping of channel III bistables, a Safety Injection Signal was generated at 1356 hours. All Engineered Safety Features (ESF) components: charging pump and valves, auxiliary feedwater pumps and valves, containment isolation valves, feedwater isolation valves, emergency diesel generators, actuated as designed. Approximately 2000 gallons of borated water was injected into the reactor coolant system. Operations personnel reset the SI signal, at 1358 hours, after verifying that this was a spurious actuation and restored the ESF components to their pre-actuation positions. An Unusual Event was declared at 1408 hours, in accordance with the Emergency Preparedness Plan.

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

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

CAUSE OF THE EVENT

The cause for this event was an inadequate review of the work request for the No. 3 120VAC Vital Bus Regulator, which resulted in the deenergization of this bus. Additional factors which contributed to the inadequate review of the work request were, an incorrect title on the work request, a lack of electrical drawings showing the location of the fuse to be replaced and the circuit breakers listed on the work request, and allowing one protection channel of pressurizer pressure to be worked while the work request would initiate maintenance activities on a component interfacing with a redundant protection channel.

CORRECTIVE ACTIONS

The following corrective actions have been taken as a result of this event:

Short-term:

1. The Safety Injection Signal was reset after verifying that the actuation was inadvertent and not necessary.
2. The Engineered Safety Features system components which actuated were restored to their pre-actuation positions.
3. Operations personnel consulted the operations procedures for the loss of the No. 3 120VAC Vital Bus to stabilize the systems and components affected by this bus.
4. The No. 3 120VAC Vital Bus was reenergized and restored to operable status at 1447 hours.
5. The Nuclear Shift Supervisor was counseled regarding appropriate reviews of work requests and the importance of the coordination of work activities on components involving redundant protection channels.

Long-term:

6. The Master Equipment List has been revised to correctly reflect the equipment designations for the uninterruptable power supplies.

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

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

7. This event will be covered at Licensed Retraining Sessions as an example of improper coordination of work activities on components involving redundant protection channels.
8. The electrical drawing showing the circuit arrangement for the inverters and regulators will be revised to show the location of the fuse and manual circuit breakers.

REPORTABILITY

This event was reported to the Nuclear Regulatory Commission at 1433 hours in accordance with 10CFR50.72.a.1.1, as an event involving the declaration of an Emergency Class specified in the Emergency Preparedness Plan. This written report is being submitted in accordance with 10CFR50.73.a.2.iv, as an event involving actuation of the Reactor Protection System and Engineered Safety Features systems.

SAFETY IMPLICATIONS

There were no safety implications as a result of this event. All Engineered Safety Features system components: charging pumps and suction valves, containment isolation valves, auxiliary feedwater pumps, feedwater isolation, and emergency diesel generators actuated as designed. As a result of the approximately 2000 gallon injection, reactor coolant system pressure increased, however no overpressure condition occurred. The Overpressure Protection System (OPPS) was in service and available to alleviate any reactor coolant system pressure excursions if required. Offsite power remained available throughout the event.

DIESEL GENERATOR RELIABILITY

The diesel generators started as designed upon receipt of the safety injection signal. As offsite power was available to supply power to the 4160VAC emergency busses, the diesel generators started but did not load. Since the diesel generator was not required to load, Diesel Generator Reliability is not required to be reported as a result of this event.

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-536), 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)

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LER NUMBER (8)

PAGE (3)

Beaver Valley Power Station Unit 2

0 5 0 0 0 4 1 2 9 2 — 0 0 6 — 0 0 0 5 OF 0 5

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

PREVIOUS OCCURRENCES

A review of the previous three years has shown one similiar event, LER 89-005-00, during which procedural and personnel errors allowed two protection channels to be tested at the same time resulting in a safety injection in a shutdown condition.