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March 12, 1996
NPD2VPO:0446

***Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, Licensee No. NPF-73
LER-96-001-00***

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

In accordance with Appendix A, Beaver Valley Technical Specifications, the following Licensee Event Report is submitted:

LER 96-001-00, 10 CFR 50.73.a.2.i.B, "Condition Prohibited by Technical Specifications - Missed Rod Position Surveillance".

T. P. Noonan
Division Vice President
Nuclear Operations/Plant Manager

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Attachment

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The Nuclear Professionals

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cc: Mr. T. T. Martin, Regional Administrator
United States Nuclear Regulatory Commission
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King of Prussia, PA 19406

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LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, 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)

05000412

PAGE (3)

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Condition Prohibited by Technical Specifications, Missed Rod Position Surveillance

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	DOCKET NUMBER	
02	12	96	96	001	00	3	13	96	N/A	05000	
									FACILITY NAME	DOCKET NUMBER	
									N/A	05000	
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)								
			20.402(b)			20.405(c)			50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)		100	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
			20.405(a)(1)(iii)			X 50.73(a)(2)(i)			50.73(a)(2)(viii)(A)		(Specify in abstract below and in Text
			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)		NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME

T.P. Noonan, Division Vice President Nuclear Operations/Plant Manager

TELEPHONE NUMBER (include Area Code)

(412) 393-7622

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS				COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
B	ID	XXXX	XXXX	N						

SUPPLEMENTAL REPORT EXPECTED (14)

YES	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X					

ABSTRACT (Limited to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On February 12, 1996, at 1330 hours, with Unit 2 operating at 100% power, it was discovered that the Plant Computer System (PCS) Rod Bank Pulse Step Counter Positions were indicating 0 steps. The PCS Digital Rod Position Indications (DRPI) indicated 228 steps for each Rod Bank, but no Rod Position Deviation Alarm was displayed on the PCS. A review of computer logs determined that the likely initiating event for this anomaly was an electrical distribution system disturbance that occurred 36 hours earlier. Investigation revealed that a software driven data point representing the Reactor Trip Breaker condition indicated a false "tripped" state. A trip condition on this data point results in the PCS Rod Bank Pulse Points being set to a value of zero and inhibits the Rod Position Deviation Monitor (RPDM) alarm. Control room operators immediately began manual logging of Rod Position in accordance with Technical Specifications. A manual cold start of the PCS was performed to reset all data points, and an Operating Surveillance Test was performed to verify the operability of the PCS RPDM.

Rod Position was logged once per shift until discovery of the inoperable RPDM, and every four hours thereafter. Technical Specifications require manual logging of rod position at least every four hours when the RPDM is inoperable. This event is being reported, in accordance with 10CFR50.73.a.2.i.B, as a condition prohibited by Technical Specifications.

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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Beaver Valley Power Station Unit 2		05000412		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
				96	001	00

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

Description of Event:

On February 12, 1996, at 1330 hours, with Unit 2 operating at 100% Reactor Power, a Computer Engineer reviewing the Plant Computer System (PCS) status discovered that the Computer Rod Bank Pulse Step Counter Positions were indicating 0 steps. Digital Rod Position Indications (DRPI) indicated 228 steps for each Rod Bank, but no Rod Position Deviation Alarm was displayed on the PCS as should have occurred under these conditions. A review of computer logs determined that the likely initiating event for this computer anomaly was an electrical distribution system disturbance that occurred at 0155 hours on February 11, 1996. This disturbance, which resulted in a fault and subsequent line breaker opening on a 138 kV distribution line, was caused by high winds. Further investigation revealed that a software driven computer data point representing reactor trip breaker condition indicated a "tripped" state. Under these conditions, the PCS Data Acquisition Program resets the Computer Rod Bank Pulse Step Counter points to a zero value. When the computer point indicates "tripped", the Rod Position Deviation Monitor will not alarm and is technically inoperable.

Cause of Event:

A review of computer logs determined that the likely initiating event for this computer anomaly was an electrical distribution system disturbance that occurred at 0155 hours on February 11, 1996. This disturbance, which resulted in a fault and subsequent breaker opening on a 138 kV distribution line, was caused by high winds. Numerous "false" computer and annunciator alarms were received in the Unit 2 Control Room at this time, including the field inputs to the software driven Reactor Trip Breaker Point. When the numerous computer alarms cleared the software driven computer point did not return to normal. The PCS Data Acquisition Program then zeroed the Rod Bank Pulse Points and the PCS Rod Position Monitor Program inhibited the Rod Deviation Alarm. The Computer Engineer apprised the Assistant Nuclear Shift Supervisor of this condition upon discovery, and Control Room Operators commenced manual logging of Rod Position.

Corrective Actions:

- 1) The Assistant Nuclear Shift Supervisor and Control Room Operators were notified of the condition of the Rod Position Deviation Monitor, and commenced manual logging of Rod Position once per four hours in accordance with Technical Specification Surveillance Requirement 4.1.3.1.2.
- 2) A manual cold start of the Plant Computer System was performed to force a recalculation of all computer data points.
- 3) The Rod Position Deviation Alarm Operating Surveillance Test was performed to verify the operability of the PCS Rod Position Deviation Monitor.
- 4) Database modifications were implemented that will provide positive indication of the status of the PCS Rod Deviation Monitor Alarm under the circumstances described in this event.
- 5) A procedure change was implemented to log the PCS Rod Bank Pulse Positions and compare them with bench board indications when the once per shift surveillance of the rod positions is performed by Operations.

LICENSEE EVENT REPORT (LER)
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Corrective Actions (con't)

6) Further investigation will be performed in an attempt to determine the cause for the false indication of the software driven computer point. Any additional recommendations will be implemented based on the results of the investigation

Reportability:

Technical Specification Surveillance Requirement 4.1.3.1.2 requires that the position of each full length rod be verified once per four hours when the Rod Position Deviation Monitor is inoperable. This event is being reported in accordance with 10CFR50.73.a.2.i.B, as a condition prohibited by Technical Specifications.

Safety Implications:

There were minimal safety implications as a result of this event. The Bench Board Rod Bank Indications and the Digital Rod Position Indication System were in service throughout this incident. Operators complied with the once per twelve hours Technical Specification requirement by logging Rod Position once per shift.

Similar Events:

Beaver Valley Power Station Unit 2 has previously submitted LERs due to missed surveillances. None of the previously reported missed surveillances involved the Rod Position Deviation Monitor.

LER 95-005-00 "Missed Surveillance-Quadrant Power Tilt Ratio Calculation not performed"
LER 92-012-00 "Missed Reactor Coolant System Dissolved Oxygen Sample"
LER 92-001-00 "Operators Failed to Manually Log Axial Delta Flux"
LER 90-024-00 "Chemist Failed to Perform Sample on Boric Acid Storage Tank"