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November 11, 1999

L-99-170

Beaver Valley Power Station, Unit No. 2
Docket No. 50-412 License No. NPF-73
LER 99-009-00

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 99-009-00, 10 CFR 50.73(a)(2)(i), "Missed Performance of Technical Specification Surveillance Requirement 4.8.1.1.1a Following Failure to Re-Establish Auto Bus Transfer Capability of 4KV Bus 2A."

K. L. Ostrowski

K. L. Ostrowski
Division Vice President
Nuclear Operations and
Plant Manager

Attachment

IE22

POR ACCL

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NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION
(6-1998)

LICENSEE EVENT REPORT (LER)

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

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Beaver Valley Power Station Unit 2	05000412	1 OF 8

TITLE (4)
Missed Performance of Technical Specification Surveillance Requirement 4.8.1.1.1a Following Failure to Re-Establish Auto Bus Transfer Capability of 4KV Bus 2A

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
									N/A	
10	12	99	99	009	00	11	11	99	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	099

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
M. S. Ackerman, Manager Safety & Licensing	(412) 393-5203

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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 15 single-spaced typewritten lines) (16)

At approximately 1730 hours on 10/12/99, the input power supply to Unit 2 4KV Bus 2A was realigned from Unit Station Service Transformer (USST) 2C to the System Station Service Transformer (SSST) 2A to support startup of a Cooling Tower pump. The pump was started and the input power supply to the bus was realigned back to USST 2C, at approximately 1741 hours (same day). On 10/13/99, at approximately 0322 hours, it was discovered that the auto bus transfer capability to the off-site A.C. power source had not been reestablished during the bus realignment. The bus was then properly aligned for auto bus transfer capability. This event had rendered one of two offsite A.C. power sources inoperable and required entry into ACTION a of Technical Specification (TS) 3.8.1.1 within 1 hour, which had not been performed. The TS implications of this event were recognized at approximately 1700 hours on 10/13/99. This event is reportable per 10CFR50.73(a)(2)(i)(B).

This event resulted from personnel error by the Balance of Plant Operator (PO) (utility, licensed Operator) when the auto-closure circuit logic for input power supply breaker ACB-42A of SSST 2A to the bus was not properly aligned, contrary to procedure 2OM-36.4.B. Event contributors: diversion of the PO's and Assistant Nuclear Shift Supervisor's attention from performing the procedure, inadequate self-checking, and TS consequences not understood by the 0000-0800 Operating Shift on 10/13/99. Licensed Operators on the Operating Shift of 0000-0800 hours on 10/13/99 were appropriately counseled, removed from licensed shift duties, and received remedial training in license review of TS and timeliness of reporting plant conditions. 2OM-36.4.B was revised to emphasize TS 3.8.1.1. By 3/31/2000 Licensed and non-licensed Operators will receive subsequent training to address this event.

PLANT AND SYSTEM IDENTIFICATION

Westinghouse Pressurized Water Reactor (PWR)
4KV Bus 2A {EK/BU}*

* Energy Industry Identification System (EIIS), system and component function identifier codes appear in the text as {XX/XX}.

EVENT DESCRIPTION

On October 12, 1999, at approximately 1730 hours, the power supply input to Unit 2 4KV Bus 2A was transferred from the onsite Unit Station Service Transformer (USST) 2C to the offsite System Station Service (SSST) Transformer 2A (see Figure 1). This was done to support start-up of a cooling tower pump. The pump was started and 4KV Bus 2A was realigned back to USST 2C, at approximately 1741 hours (same day). Subsequently, at approximately 0322 hours on October 13, 1999, it was discovered that the auto bus transfer feature of 4KV Bus 2A to the off-site alternating current (A.C.) power source had not been re-established when 4KV Bus 2A was re-aligned back to USST 2C. This event occurred when the auto-closure circuit for input power supply breaker ACB-42A of SSST 2A to 4KV Bus 2A Bus was not placed in the "after-close position", as required by procedure. This had rendered 4KV automatic offsite A.C. power to Bus 2A inoperable and required entry into ACTION a of Technical Specification (TS) 3.8.1.1 within 1 hour, which was not performed. The TS implications of this event were recognized at approximately 1700 hours on October 13, 1999.

The following provides an expanded narrative of this event:

October 12, 1999

At approximately 1730 hours, the Unit 2 Balance of Plant Operator (PO) (utility, licensed Operator) transferred the 4KV Bus 2A from the USST 2C {EK/XFMR} to the SSST 2A {EK/XFMR} in accordance with procedure 2OM-36.4.C, "Transferring 4KV System From US Serv Tfmr to SS Serv Tfmr". Use of 2OM-36.4C was done with the procedure in hand. This evolution was performed to raise the supply voltage in support of the start-up of Cooling Tower Pump 2CWS-P21A {SD/P}, at approximately 1735 hours (same day).

Following the startup of 2CWS-P21A, at approximately 1741 hours, the PO transferred the 2A 4KV Bus back from the SSST to the USST in accordance with procedure 2OM-36.4.B, "Transferring 4KV System From SS Serv Tfmr to US Serv Tfmr". This procedure was in-hand during

EVENT DESCRIPTION (continued)

this transfer. During this evolution, the PO was observed by the Assistant Nuclear Shift Supervisor (ANSS) (utility, licensed Operator) for a portion of the procedure. Just prior to step 9 in section A, "System Transfer", of the procedure, the ANSS was required to assist in the response to an emergent condition involving degrading Main Condenser vacuum. Prior to performing this step in the procedure, the PO moved from the control board to the computer console to provide follow-up assistance to the degrading Main Condenser vacuum condition. Following successful response to the Main Condenser vacuum condition, the PO returned to the control board to complete the performance of 2OM-36.4.B. However, the incurred interruption in completing the procedure resulted in PO's distraction from completing Section B, of the procedure, "Setup for auto transfer as follows:". The PO mistakenly concluded that he had completed the transfer procedure and he then informed the ANSS to this effect. As such, at this time the improper alignment of the 4KV Bus 2A transfer scheme remained unidentified.

October 13, 1999

Operating Surveillance Test 2OST-36.7, "Offsite to Onsite Power Distribution System Breaker Alignment Verification" was commenced, per the weekly schedule. While performing the breaker alignment checks of Data Sheet 1 for 2OST-36.7 the Reactor Operator (RO) identified that the neon light that signifies that the logic for breaker ACB-42 is setup for Automatic Bus Transfer, was not lit. Subsequently, at approximately 0315 hours, the PO observed that the ACB-42A breaker control switch was not red targeted (after closed). This indicated to the PO that the Auto bus transfer function was not enabled. The PO brought the alignment problem with ACB-42 to the attention of the ANSS and the Nuclear Shift Supervisor (NSS).

At approximately 0322 hours, the NSS directed the ANSS and the RO to restore Auto bus transfer to 4KV Bus 2A in accordance with 2OM-36.4.B section B. At approximately 0340 hours, the performance of 2OST-36.7 was completed by the RO and was accepted by the, ANSS, and NSS as being satisfactory.

At approximately 1700 hours, while reviewing the previous shift logs, the 1600-2400 hours Shift determined that a failure to comply with the specified action of TS 3.8.1.1. had occurred. Plant Senior Management was notified and Condition Report (CR) No. 992763 was written to document this discovery.

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 2	05000412	99	009	00	4 OF 8

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

EVENT DESCRIPTION (continued)

This event identified a failure of the 0000-0800 hours Operating Shift on October 13, 1999 to meet Management Expectations, when the Shift did not initiate a CR upon the discovery and correction of the auto-close logic alignment to 4KV Bus 2A. However, the actions of the Shift were documented in the Shift Operating Log.

REPORTABILITY

The Limiting Condition for Operation of TS 3.8.1.1 requires the existence of two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system. The failure to establish the capability of Class 1E 4KV Bus 2A for auto-transfer to the off-site A.C. power source thereby required entry into ACTION a of TS 3.8.1.1. Consequently, the incurred failure to comply with the required TS ACTION constitutes non-compliance with the TS. This condition is a non-emergency event applicable to the 30-day reporting criteria of 10 CFR 50.73(a)(2)(i)(B), as "any operation or condition prohibited by the plant's Technical Specifications."

CAUSE OF THE EVENT

This event resulted from personnel error by the PO on October 12, 1999 when he failed to properly line up the auto-closure circuit for input power supply breaker ACB-42A of SSST 2A to 4KV Bus 2A.

Event contributors:

- Diversion of the PO's and ANSS's attention from performing the procedure in order to assist in the restoration of the Main Condenser low degraded vacuum condition.

- Inadequate self-checking by the PO and ANSS during performance of 2OM-36.4.B. This resulted in an incomplete procedure performance and a disabled auto transfer logic to offsite A.C. power source.

- Use of 2OM-36.4.B did not provide a note or caution emphasizing entry into TS 3.8.1.1.

- The TS consequences resulting from the disabled auto transfer capability to offsite A.C. power of 4KV 2A Bus were not understood by the 0000-0800 hours Operating Shift which discovered the condition.

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 2	05000412	99	009	00	5 OF 8

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

SAFETY IMPLICATIONS

Required ACTION a of TS 3.8.1.1, specifies that with one offsite A.C. circuit inoperable, to demonstrate the OPERABILITY of the remaining A.C. sources by performing TS Surveillance Requirement (TSSR) 4.8.1.1.1a within 1 hour and at least 8 hours thereafter. The TSSR verifies correct breaker alignment and indicated power availability and automatic transfer logic of the remaining A.C. sources. 2OST-36.7, "Offsite to Onsite Power Distribution System Breaker Alignment Verification", was satisfactorily completed within approximately 5 hours and 7 minutes after 4KV Bus 2A was not aligned for auto transfer to the off-site A.C. source. Throughout this event, the capability existed to manually align the offsite A.C. source to 4KV Bus 2A and the respective onsite emergency A.C diesel generator remained available to power to the bus. In addition, the capability existed for automatic or manual alignment of the offsite A.C. source to corresponding 4KV Bus 2D and the respective onsite emergency A.C. diesel generator to the 4KV Bus 2D remained available (see Figure 1). During this event, the 1 hour time frame to complete TSSR 4.8.1.1.1a was not met. However, the performance of 2OST-36.7 demonstrated the capability and availability of the remaining emergency bus sources for automatic transfer to offsite A.C. power. Based on that as described above, there were minimal implications to the health and safety of the public.

CORRECTIVE ACTION

1. At approximately 1800 hours on October 13, 1999, an Operations Directive was entered into the Nuclear Operations Management System log on both Units to ensure initialing and place keeping of safety-related equipment procedure steps not having a required sign-off.

2. The above described Operations Directive will be formalized in plant administrative procedures by December 17, 1999.

3. 2OM-36.4.B and the corresponding Unit 1 procedure were subsequently revised on October 21, 1999 to emphasize TS 3.8.1.1.

4. Licensed Operators on the Operating Shift of 0000-0800 hours on October 13, 1999 were removed from licensed shift duties, appropriately counseled, and received remedial training in license review of TS and timeliness in generating CRs and appropriate notification of Management. These Licensed Operators were then returned to normal shift duties.

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 2	05000412	99	009	00	6 OF 8

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

CORRECTIVE ACTION (continued)

5. The PO and ANSS of the 1600-2400 hours shift on October 12, 1999 were counseled.

6. By March 31, 2000, Licensed and non-licensed operators on both Units will receive subsequent training to address this event.

7. By June 30, 2000, Plant Engineering will evaluate the design capacity of electrical busses that require the Plant Operators to transfer sources to permit the starting of large electrical loads.

PREVIOUS SIMILAR EVENTS

A review of previous Beaver Valley Power Station Unit 1 and Unit 2 LERs within the last three years for missed Technical Specification surveillances identified the following LERs:

LER 1-97-001, "Generic Letter 96-01 Inadequate Surveillance Testing of Safety Related Logic Circuits."

LER 1-97-012, "Analog Rod Position Channels Inoperable."

LER 1-97-042, "Failure to Perform Axial Flux Difference Monitor Surveillance as Required by Technical Specifications."

LER 1-98-004, "Failure to Perform Required Valve Surveillances for Boron Injection, ECCS, and Quench Spray as Required by Technical Specifications."

LER 1-98-005, "Failure to Comply with the Surveillance Requirement for the Boron Injection Tank Surge Tank Boron Concentration."

LER 1-98-006, "Inadequate Routine Weekly Surveillance Testing of the Onsite A.C. Power Distribution System."

LER 1-98-015, "Inadequate Performance of Channel Functional Tests."

LER 1-98-018, "Inadequate BVPS Unit 1 Procedures to Ensure Compliance with Tech Specs."

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 2	05000412	99	009	00	7 OF 8

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

PREVIOUS SIMILAR EVENTS (continued)

LER 1-98-019, "Routine Technical Specification Surveillance of Swing Load Interlocks for EDG Loading Not Performed and Failure to Comply with TS Action Statement When Identified."

LER 1-99-008, "Missed Inservice Testing Program Surveillance Attribute."

LER 1-99-009, "Missed Surveillance of Component Cooling Water System 10" to 8" Header Cross-Connect Inlet Isolation Valve."

LER 1-99-011, "Inadequate Axial Flux Difference (AFD) Monitor Alarm Surveillance."

LER 2-97-009, "Missed Surveillance of the Gaseous Waste Storage Tank Radioactive Material Quantity Determination."

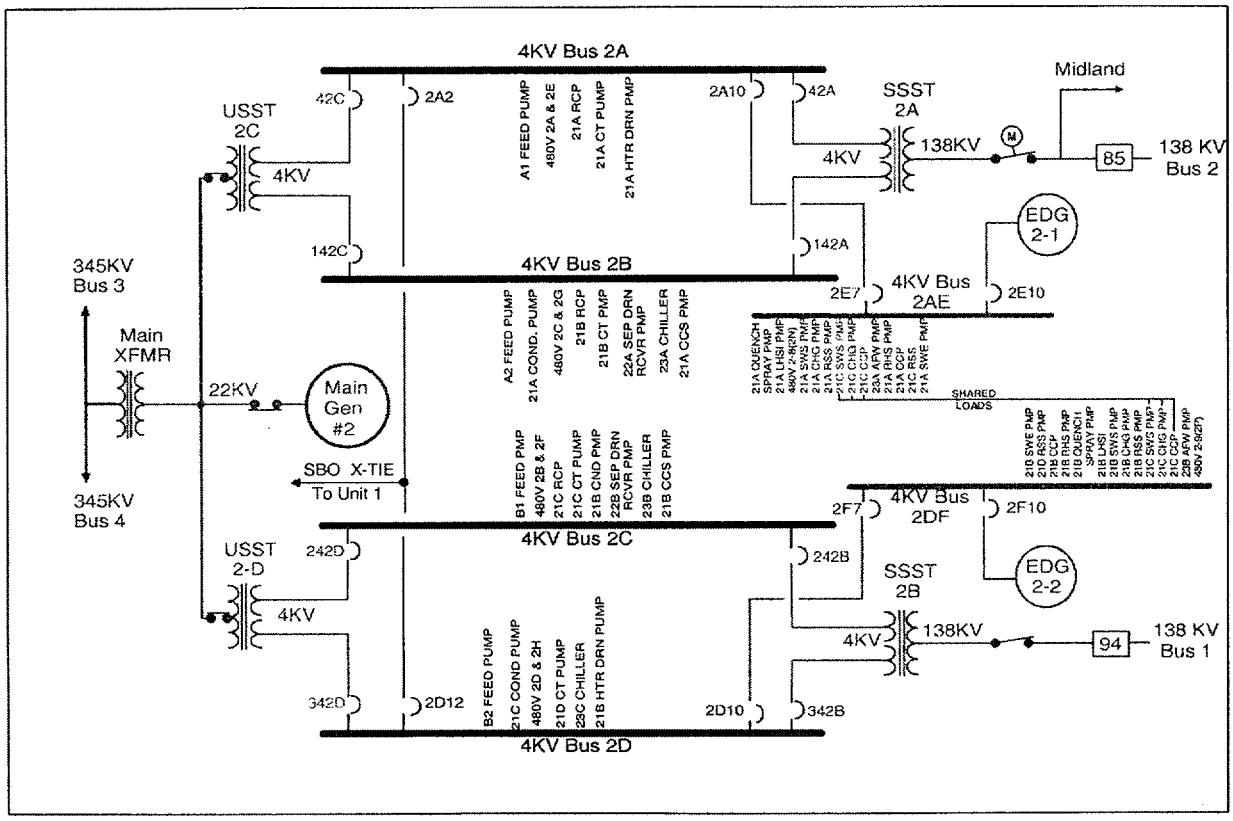
LER 2-98-003, "Tech Spec 3.0.3 Entry Due to Inoperability of Both Trains of the SLCRS."

LER 2-98-007, "Inadequate Beaver Valley Power Station Unit 2 Procedures to Ensure Compliance with Tech Specs."

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Beaver Valley Power Station Unit 2	05000412	99	009	00	8 OF 8

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

FIGURE 1



4KV Electrical Distribution - Unit 2