



PEACH BOTTOM--THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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Delta, Pennsylvania 17314

(717) 456-7014

February 18, 1991

Docket No. 50-277

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

SUBJECT: Licensee Event Report  
Peach Bottom Atomic Power Station - Unit 2

This LER concerns the Reactor Protection System bus trip due to undervoltage.

Reference: Docket No. 50-277  
Report Number: 2-91-003  
Revision Number: 00  
Event Date: 01/21/91  
Report Date: 02/18/91  
Facility: Peach Bottom Atomic Power Station  
RD 1, Box 208, Delta, PA 17314

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(iv).

Sincerely,

cc: J. J. Lyash, USNRC Senior Resident Inspector  
T. T. Martin, USNRC, Region I

bcc: R. A. Burrecilli, Public Service Electric & Gas  
Commitment Coordinator  
Correspondence Control Program  
T. M. Gerusky, Commonwealth of Pennsylvania  
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Nuclear Records - PBAPS  
H. C. Schwemm, VP - Atlantic Electric  
J. Urban, Delmarva Power

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 2	DOCKET NUMBER (2) 05000277	PAGE (3) 1 OF 04
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TITLE (4)  
'2B' Reactor Pressure System Bus Trip on Undervoltage due to '3B' Recirc. Pump Start

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (5)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0	1	2	1	9	1	0	0	3	0	0	0
0	1	2	1	9	1	0	0	2	1	8	9

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.73 (Check one or more of the following) (11)										
	POWER LEVEL (10) 01010	20.402(b)			20.406(c)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)			73.71(b)
		20.405(a)(1)(ii)			50.36(a)(1)			50.73(a)(2)(v)			73.71(w)
		20.405(a)(1)(iii)			50.36(a)(2)			50.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 300A)
		20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(vii)(A)			
		20.405(a)(1)(v)			50.73(a)(2)(vi)			50.73(a)(2)(viii)(B)			
20.405(a)(1)(vi)			50.73(a)(2)(iii)			50.73(a)(2)(v)					

LICENSEE CONTACT FOR THIS LER (12)

NAME A. A. Fulvio, Regulatory Engineer	TELEPHONE NUMBER 717 456-1701
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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

SUPPLEMENTAL REPORT EXPECTED (14)	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	

ABSTRACT (Limit to 1400 spaces - 4 approximately fifteen page space typewriter lines) (16)

On 1/21/91, at 0252 hours, a Unit 2 Primary Containment Isolation System (PCIS) Group III outboard isolation occurred along with initiation of the Standby Gas Treatment System (SBGT) when the 'B' Reactor Protection System (RPS) bus tripped on undervoltage. These actions occurred when the Unit 3 'B' recirculation pump motor-generator (M-G) set was started. Starting the recirc M-G set lowered the voltage on the Unit 2 startup source which caused an undervoltage condition on the same bus that was supplying the '2B' RPS logic and the outboard PCIS logic. The '2B' RPS was being supplied by the alternate supply with the static inverter bypassed. The low voltage condition caused an undervoltage trip of the alternate source breaker thereby removing power to the '2B' RPS and outboard PCIS logic. No actual safety consequences occurred as a result of this event. The procedure used for starting a recirculation motor-generator set has been revised to inform operations personnel that when starting a M-G set which is powered by the same startup source as the RPS Alternate power supply they may receive a half scram, half Group III isolation, and a SBGT start if RPS is being supplied from its alternate source with the static inverter bypassed. There are four previous similar events.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Peach Bottom Atomic Power Station Unit 2	DOCKET NUMBER (2)  0 5 0 0 0 2 7 7	LER NUMBER (3)			PAGE (3)  3 4
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		9 1	0 0 3	0 0	

TEXT (If more space is required, use additional NRC Form 306A's) (17)

Requirements for the Report

This report is required per 10 CFR 50.73(a)(2)(iv) due to automatic actuation of an Engineered Safety Feature (ESF).

Unit Conditions at Time of Event

Unit 2 was in the Refuel mode at 0% of rated thermal reactor power with scram inserted. The Unit 2 '2B' Reactor Protection System (RPS) was being supplied from the alternate feed (See Figure 1) due to outage conditions. The Unit 2 Static Inverter was bypassed for maintenance. Unit 3 was in the startup mode.

Description of Event

On 1/21/91, at 0252 hours, a Unit 2 Primary Containment Isolation System (PCIS)(E11S:JM) Group III outboard ventilation isolation occurred along with initiation of the Standby Gas Treatment System (SBGT) when the 'B' RPS bus tripped on undervoltage. These actions occurred when the Unit 3 'B' recirculation pump motor-generator (M-G) set was started. Starting the recirc M-G set lowered the voltage on the Unit 2 startup source which caused an undervoltage condition on the E-12 emergency bus. At the time of this event the '2B' RPS logic and the outboard PCIS logic were being supplied by their alternate source with the static inverter bypassed. The '2B' RPS bus is normally supplied by the '2B' RPS M-G set. When the normal source is not available, the preferred alternate supply is the static inverter. Since the alternate source in this case was supplied by the E-12 bus, the low voltage condition caused an undervoltage trip of the alternate source breaker thereby removing power to the '2B' RPS and outboard PCIS logic.

Cause of Event

The cause of the event was an undervoltage condition on the RPS Alternate supply. This was a result of the starting of a large motor which was being supplied by the same source as the '2B' RPS with the static inverter bypassed.

Analysis of Event

No actual safety consequences occurred as a result of this event. At the time of this event Unit 2 was shutdown and in the refuel mode. All systems functioned properly. If this event would have occurred at power it would have resulted in a half scram and a group III outboard isolation, neither of which would produce adverse consequences.

Corrective Actions

The procedure used for starting a recirculation motor-generator set has been revised to inform operations personnel that when starting a recirc M-G set which is powered by the same startup source as the the RPS Alternate power supply they may receive a half scram, half Group III Isolation, and a SBGT

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 386A's) (17)

start if RPS is being supplied from its Alternate Source with the Static Inverter bypassed. The pertinent information contained in this report will be routed to appropriate Operations personnel.

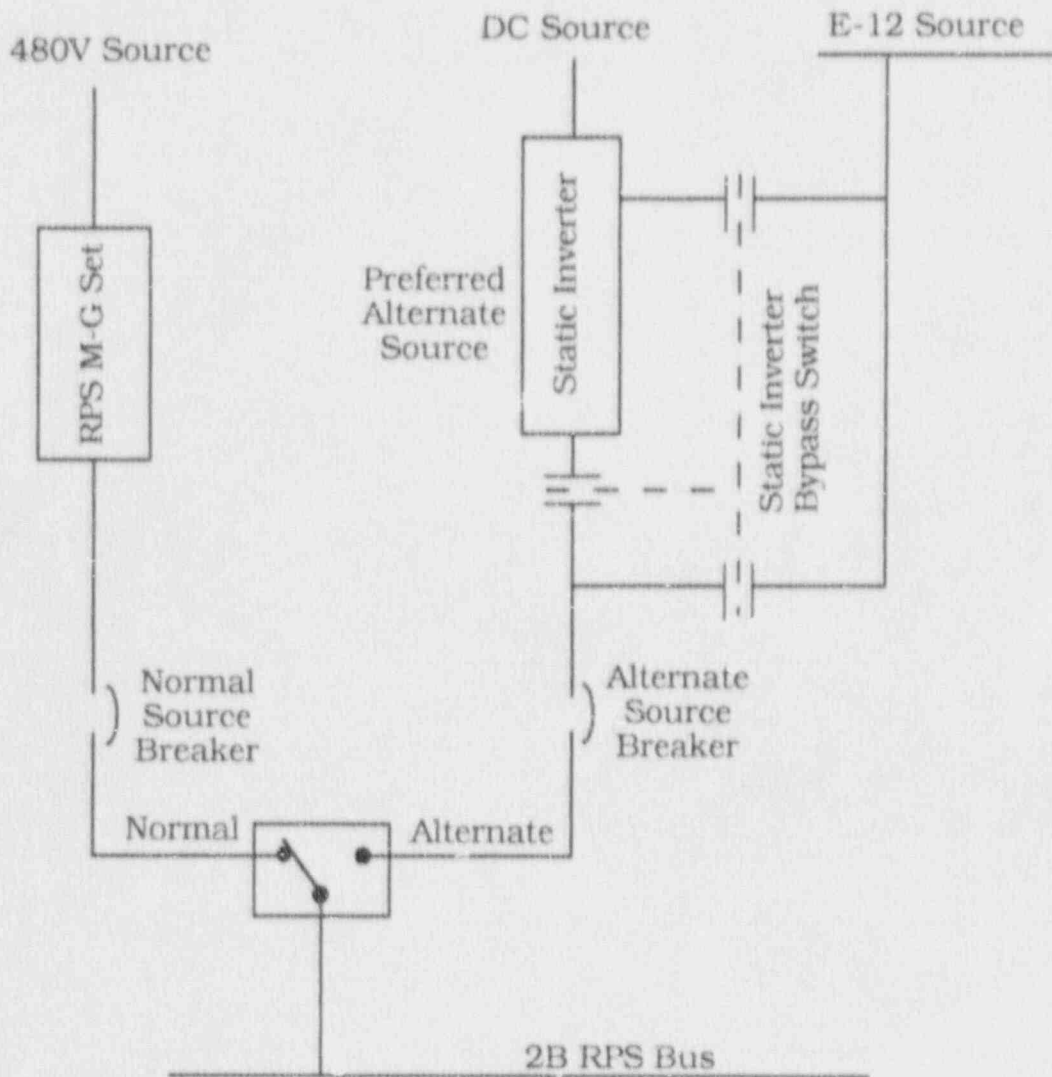
Previous Similar Events

There are four previous similar events involving RPS trips when a large pump was started. LER 2-86-04, 2-86-06, 3-86-01, and 3-88-08 resulted in supplying the RPS with a more reliable alternate feed static inverter. Since the static inverter was bypassed, the corrective actions of the previous LERs would not have prevented this event.

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			003	00	04	OF

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RPS Bus Normal and Alternate Supply

Figure 1