CCN 92-14098

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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KEN POWERS
PLANT MANAGER

August 10, 1992

Docket No. 50-278

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

SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Unit 3

This LER concerns manual SCRAM on low condenser vacuum following the loss of the Offgas Recombiner system due to a loose Pressure Control Valve feedback linkage.

Reference:	Docket No. 50-278
Report Number:	3-92-005
Revision Number:	00
Event Date:	07/14/92
Report Date:	08/10/92
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,

Ken Powers

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IE22 1/1

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NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROV OMB NO. 3150-0104
(RES 4/30/92
ESTIMATED BURDEN R RESPONSE TO COMPLY WITH THIS INFORMATION COLLE ION 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)	PAGE (3)
Peach Bottom Atomic Power Station - Unit 3	0 5 0 0 0 2 7 8	1 OF 0 3

TITLE (4) Manual Scram on Low Condenser Vacuum Following the Loss of the Offgas Recombiner System due to a Loose Pressure Control Valve Feedback Linkage

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 0 0
0 7	2 4	9 2	9 2	— 0 0 5	— 0 0	0 8	1 0	9 2		0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)							
POWER LEVEL (10)	0 5 5		20.402(b)		20.405(c)	X	50.73(a)(2)(iv)		73.71(b)
			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
Albert A. Fulvio, Regulatory Supervisor	7 1 7 4 5 6 - 7 0 1 4

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	
B	W F	R C V	H 2 6 0	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 7/14/92 at approximately 1150 hours, an Offgas Recombiner low flow condition caused main condenser vacuum to begin decreasing. A fast reactor power reduction was initiated in accordance with the procedure for a loss of main condenser vacuum. At 1155 hours, a manual scram was initiated by placing the mode switch in shutdown following the receipt of a reactor auto half scram signal. A Group II and III isolation occurred as a result of the manual scram. The cause of the event has been determined to be a loose Pressure Control Valve (PCV) feedback linkage. The Steam Jet Air Ejector PCV feedba linkages on both units have been replaced with an improved design. No actual fety consequences occurred as a result of this event. There are no previous similar LERs.

Requirements for the Report

This report is submitted to satisfy the requirements of 10CFR50.73(a)(2)(iv) because of a manually initiated scram and resulting primary containment isolation.

Unit Condition At Time of Event

Unit 3 was in the RUN mode at approximately 63% thermal reactor (EIIS:EA) power. There were no systems, structures, or components that were inoperable that contributed to the event.

Description of Event

On 7/14/92 at approximately 1150 hours with the "3A" Steam Jet Air Ejector (SJAE) inservice, an Offgas Recombiner (EIIS:WF) low flow condition caused the main condenser (EIIS:SG) vacuum to begin decreasing. After a condenser low vacuum alarm was received, a fast reactor power reduction was initiated in accordance with the "Fast Reactor Power Reduction" General Procedure (GP-9-3) and the "Condenser Low Vacuum" Operational Transient Procedure (OT-106). The "3B" SJAE was placed inservice but sufficient offgas flow could not be re-established. Sufficient time was not available to lineup and warm the system.

At 1155 hours, with the Reactor at approximately 55% power, a reactor auto half scram signal (EIIS:JC) was received due to the rapidly decreasing main condenser vacuum. Unit 3 was then manually scrammed by placing the mode switch in the "SHUTDOWN" position. Primary Containment Isolation System (PCIS) (EIIS:JM) Group II/III isolations occurred as expected when Reactor level dropped below 0" as a result of void collapse upon insertion of the control rods. The Reactor Feed Pumps (EIIS:SK) were in service to recover and maintain the reactor vessel (EIIS:RPV) level after the scram. The NRC was notified of the event via ENS at 1348 hours.

Cause of the Event

The cause of the event has been determined to be that the "3A" SJAE steam inlet Pressure Control Valve (PCV) (EIIS:PCV) failed to provide adequate steam to the Ejector. An investigation revealed that the PCV failed to properly control steam pressure just prior to the event due to a loose PCV positioner feedback linkage.

Problems have been experienced with similar type positioner feedback linkage. These problems were previously experienced only on the Feedwater Heater drain and dump valves. The positioners on the Feedwater valves are currently being evaluated for a new type linkage.

Analysis of the Event

No actual safety consequences occurred as a result of this event. The manual scram was initiated on loss of main condenser vacuum in anticipation of the automatic scram. Had condenser vacuum been lost at 100% power, an automatic scram would have been received as designed.

Corrective Actions

The SJAE PCV feedback linkages on both Unit 2 & 3 have been replaced with an improved design to prevent future recurrences.

Corrective actions are in progress which include the evaluation of the new type linkage for other applications in the plant. Recommendations will be implemented as appropriate pending the results of the evaluation.

Previous Similar Events

No previous similar LERs have been identified which involve valve positioner feedback linkage problems. However, based on the problems experienced with similar type feedback linkages on the Feedwater Heater valves, corrective actions are inprogress to minimize future recurrences in the Feedwater system.