



PEACH BOTTOM—THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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Delta, Pennsylvania 17314

(717) 456-7014

May 9, 1991

Docket No. 50-278

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

SUBJECT: Licens² Event Report
Peach Bottom Atomic Power Station - Unit 3

This LER concerns a Technical Specification Violation which was the result of the Drywell Atmospheric Radiation Monitor being isolated from the drywell atmosphere for an indeterminate amount of time due to an unknown cause.

Reference:	Docket No. 50-278
Report Number:	3-91-006
Revision Number:	00
Event Date:	04/10/91
Report Date:	05/09/91
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)(i)(B).

Sincerely,

cc: J. J. Lyash, USNRC Senior Resident Inspector
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bcc: R. A. Burricelli, Public Service Electric & Gas
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 2 7 8				PAGE (3) 1 OF 0 3	
TITLE (4) Technical Specification Violation due to a Mispositioned Valve on the Drywell Radiation Monitor as a Result of an Unknown Cause															
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		
0 4	1 0	9 1	9 1	0 0 6		0 0	0 5	0 9 9 1					0 5 0 0 0		
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)													
N		20.402(b)				20.405(c)				50.734(2)(iv)				73.71(b)	
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(a)(1)				50.734(2)(v)				73.71(c)	
1 0 0		20.405(a)(1)(ii)				50.36(a)(2)				50.734(2)(vi)				OTHER (Specify in Abstract Draw and in Text, NRC Form 366A)	
		20.405(a)(1)(iii)				50.734(2)(ii)				50.734(2)(viii)(A)					
		20.405(a)(1)(iv)				50.734(2)(iii)				50.734(2)(viii)(B)					
		20.405(a)(1)(v)				50.734(2)(iv)				50.734(2)(ix)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME A. A. Pulvio, Regulatory Engineer										TELEPHONE NUMBER					
										AREA CODE 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 NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC					
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)			
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO			

ABSTRACT (Limit to 1400 words; i.e., approximately three single-space typewritten lines) (16)

On 4/10/91 at 0745 hours with Unit 3 operating at 100% power, it was discovered that the Drywell Atmospheric Radiation Monitor (DARM) had been isolated from the drywell atmosphere for an indeterminate period of time. This is a violation of Technical Specification 4.6.C.2, which requires that drywell atmospheric radiation levels be monitored and recorded at least daily. The isolation of the DARM was a result of a mispositioned valve on the sample line to the DARM. The cause of the event is unknown. The mispositioned valve was returned to the normal position and drywell atmospheric radiation levels were verified to be within expected normal operating values. This report will be distributed to the appropriate site groups for review with their personnel. There were no actual safety consequences as a result of this event. No previous similar LER's were identified.

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

Requirements for the Report

This report is being issued pursuant to 10 CFR 50.73(a)(2)(i)(B) due to a violation of Technical Specifications.

Unit Status at Time of Event

Unit 3 was in the RUN mode operating at 100% power. There were no other systems, structures, or components that were inoperable that contributed to the event.

Description of the Event

On 4/10/91 at 0745 hours, with Unit 3 operating at 100% power, it was discovered during the performance of a surveillance test (ST) that the Drywell Atmospheric Radiation Monitor (DARM)(E11S:MON) had been isolated from the drywell (E11S:JM) atmosphere for an indeterminate period of time. This is a violation of Technical Specification (Tech Spec) 4.6.C.2, which requires that drywell atmospheric radioactivity levels be monitored and recorded at least daily. Although daily readings were taken and recorded daily, they were not representative of actual drywell conditions during the period of time that the DARM was isolated.

The DARM contains two valves, one electrically operated (E11S:20) and one manually operated (E11S:SHV). These valves allow either a sample input or a purge of the monitor to be selected. The electrically operated valve is used during normal operation of the DARM. The manual valve is a backup to the electric valve and is not normally manipulated. In this event, it was discovered that the manual valve, which is located inside the DARM cabinet, was in the purge position. A Chemistry Technician, who was performing a weekly filter changeout, noticed that the manual valve was not in its usual position. The technician immediately returned the valve to the normal, sample, position and notified chemistry and shift supervision. Drywell atmospheric radiation levels were subsequently verified to be within expected normal operating limits.

Cause of the Event

The cause of the event is unknown.

An investigation was performed in an attempt to identify the cause of the mispositioning of the manual sample/purge valve. A review of past maintenance, surveillance and troubleshooting activities on or associated with the DARM was performed. No cases were identified which would have required the manual valve to be manipulated.

Chemistry technicians, who are normally responsible for the operation of the DARM, were interviewed concerning this event. None of the personnel interviewed could remember operating the manual valve for any reason. Additionally, the manual valve is properly labeled to indicate its appropriate normal position and to require the notification of Shift Supervision prior to manipulation from the sample position. Since the normal radiation levels indicated on the DARM are at or near the low end of the instrument's detectability spectrum, readings with the DARM isolated from the drywell would appear to be normal. Therefore, the cause for the mispositioning of

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

the valve as well as the period of time that the DARM was isolated could not be determined. It is unlikely that the valve was out of position for any substantial amount of time due to the fact that the chemistry technicians who perform weekly filter changeouts in the cabinet had not previously noticed the mispositioning.

Analysis of the Event

No actual safety consequences occurred as a result of this event.

The DARM provides continuous monitoring of the drywell airborne radioactivity. As described in Peach Bottom Atomic Power Station Final Safety Analysis Report section 4.10.3.2, any sudden increase in the monitor readings could indicate the presence of steam or reactor water leakage. The objective of the DARM, as indicated in Regulatory Guide 1.45 Position 5, is to be able to detect less than 1 gallon per minute (GPM) of unidentified Primary Coolant Pressure Boundary (PCPB) leakage in one hour. The reliability, sensitivity and response times of the DARM to detect 1 GPM in 1 hour of PCPB leakage depends on many complex factors such as the source of the leakage, drywell conditions, and the physical properties and capabilities of the detectors. Therefore, there is no direct correlation or known relationship between the DARM count rate and leakage rate because the coolant activity levels, source of leakage, and background radiation levels (from leakage alone) are not known and cannot be effectively determined in existing reactors. Additionally, the monitoring of drywell sump pump (EIIS:P) out rates and drywell temperature, as required by Tech Specs, also provide indication of PCPB leakage. Therefore, the loss of the ability of the DARM to monitor the drywell atmosphere was of minimal consequence.

Corrective Actions

The manual sample/purge valve was placed in the sample position on 4/10/91. Drywell atmospheric radiation levels were subsequently verified to be within expected normal operating limits.

This report will be distributed to the appropriate site groups for review with their personnel.

Previous Similar LER's

No previous similar LER's were identified.