

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET  
P.O. BOX 8699  
PHILADELPHIA PA. 19101

(215) 841-4000 10 CFR 50.73

May 16, 1988

Docket Nos. 50-277  
50-278

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

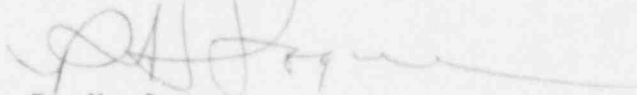
SUBJECT: Licensee Event Report  
Peach Bottom Atomic Power Station - Units 2 and 3

This LER concerns fire barrier problems, some of which were not reported to the NRC within the required 30 day period.

Reference: Docket Nos. 50-277 and 50-278  
Report Number: 2-88-07  
Revision Number: 00  
Event Date: October 15, 1987  
Report Date: May 16, 1988  
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).

Very truly yours,



R. H. Logue  
Assistant to the Manager  
Nuclear Support Division

cc: W. T. Russell, Administrator, Region I, USNRC  
T. P. Johnson, USNRC Senior Resident Inspector  
T. E. Magette, State of Maryland

8805230232 880516  
PDR ADOCK 05000277  
S PDR

JE22  
||

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 2 7 7	PAGE (3) 1 OF 06
---	--------------------------------------	---------------------

TITLE (4) Technical Specification Fire Barrier Deficiencies and Failure to Report Some Deficiencies Within 30 Days Due To Inadequate Controls

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		
1	0	1	5	8	7	8	8	8	PBAPS - Unit 3		
				0	0				DOCKET NUMBER(S) 0 5 0 0 0 2 7 8		
									DOCKET NUMBER(S) 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 0 0	20.402(b)			20.406(c)			80.73(a)(2)(iv)			73.71(b)	
	20.406(a)(1)(i)			80.39(a)(1)			80.73(a)(2)(v)			73.71(e)	
	20.406(a)(1)(ii)			80.38(a)(2)			80.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 365A)	
	20.406(a)(1)(iii)			X 80.73(a)(2)(i)			80.73(a)(2)(vii)(A)				
	20.406(a)(1)(iv)			80.73(a)(2)(ii)			80.73(a)(2)(vii)(B)				
	20.406(a)(1)(v)			80.73(a)(2)(iii)			80.73(a)(2)(ix)				

LICENSEE CONTACT FOR THIS LER (12)

NAME W. C. Birely, Senior Engineer - Licensing Section	TELEPHONE NUMBER AREA CODE: 2 1 5 8 4 1 1 - 5 0 4 8
---	--

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (if yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR
--	-------------------------------	----------------

ABSTRACT (Limit to 1400 spaces (i.e., approximately fifteen single-space typewritten lines) (16))

Abstract:

On October 15, 1987 it was determined that several fire barriers in the Turbine Building and the Radwaste Building had gaps filled with unqualified fill material. The Cable Spreading Room, as well as other rooms, is affected. This condition was not reported within 30 days in accordance with 10 CFR 50.73 as a result of inadequate programmatic controls to ensure that deficient conditions are evaluated for reportability. On April 15, 1988 a hole (3 in. dia.) in the floor (a fire barrier) of the Cable Spreading Room was discovered. A panel which contains annunciator related circuitry rests on this hole. These conditions are reportable because they violated the Technical Specification requirement for functional fire barriers.

Fire watches were established or verified to already be in place to compensate for each of these deficient barriers within one hour of discovery in accordance with the Technical Specifications. The hole in the Cable Spreading Room floor was repaired on April 25, 1988 to satisfy the 3-hour fire rating requirement. A modification has been initiated to upgrade the fill material in the fire barrier seismic gaps. This modification will be completed by August 1988 on Unit 2 and prior to restart on Unit 3. Implementation of a new expanded process for identifying and dispositioning potentially reportable items is being implemented to ensure compliance with reportability requirements.

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 8 8 - 0 0 7 - 0 0 0 2 OF 0 6	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

TEXT (If more space is required, use additional NRC Form 365A's) (17)

Unit Conditions Prior to the Discovery:

Unit 2 in Cold Condition since March 14, 1987.

Unit 3 in Cold Condition since April 1, 1987. Unit 3 Reactor Vessel Head was removed on October 5, 1987 and the Fuel was completely offloaded by October 28, 1987.

Description of the Condition/Event:

This LER reports fire barrier deficiencies which constitute failure to comply with Technical Specification 3.14.D.1, which requires "fire barriers that protect safety related systems required to ensure safe shutdown capability in the event of a fire to be functional."

On April 15, 1988 a hole was discovered in the ceiling of a Turbine Building hallway. This condition was reported to the operating shift. Investigation revealed that the hole was approximately three inches in diameter, penetrated the floor of the Cable Spreading Room and was covered by Panel 30C254C. The contents of Panel 30C254C are associated with annunciators. There is no control circuitry in this panel. The floor of the Cable Spreading Room is a fire barrier, and the hole degraded its effectiveness. A continuous fire watch was established in the Cable Spreading Room and, for personnel safety reasons, the Cardox Suppression System in the Cable Spreading Room was disabled.

On October 15, 1987 a PECO Nuclear Engineering Department-Engineering Division engineer determined that fire barriers in nine rooms in the Turbine Building and the Radwaste Building had seismic gaps containing fill material of unknown composition. Therefore, it was concluded that the material did not satisfy the three-hour fire resistance requirement. The fire barriers and affected rooms are listed in the attachment to this LER. Upon notification of this condition on October 15, 1987, the Peach Bottom Fire Protection Coordinator verified that hourly fire watches were established to cover the affected areas pursuant to Technical Specification 3.14.D.2. At this time, an evaluation of this condition for reportability was not initiated. On April 12, 1988 the Nuclear Engineering Department-Engineering Division engineer involved inquired of the Compliance Engineer whether an LER was submitted. Investigation at that time revealed that the condition had not been reported and was reportable.

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 (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 8	- 0 0 7	- 0 0	0 3	OF 0 6

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

Significance of the Condition:

From a fire protection standpoint these conditions do not pose a significant safety impact. Each of the areas associated with the deficient fire barriers is protected with automatic fire suppression equipment, except the Remote Shutdown Panel area, M-G Set Fan Rooms and stairway 24. There is very low combustible loading in the M-G Set Fan Rooms, and there are no combustibles in the stairway. There are fire detectors in the Remote Shutdown Panel area and M-G Set Fan Rooms. Therefore, if a fire occurred in one of the affected areas, it would either be automatically suppressed or detected and manually suppressed prior to spreading to another fire area despite the deficiencies in the fire barriers.

Carbon dioxide could leak through the hole in the floor of the Cable Spreading Room if the system actuated. If this had occurred, personnel passing through the hallway would have been alerted to the presence of the carbon dioxide because it is odorized with a wintergreen scent. This hallway is typically not continuously occupied, which reduces the likelihood that personnel would have been exposed to carbon dioxide.

Cause of the Event:

It is believed that the hole in the Cable Spreading Room floor existed prior to the walk-downs that were conducted to ensure compliance with Appendix R, and was missed during those walk-downs because of its inconspicuous location.

The unqualified seismic gap fill material (which has been determined to be polyethylene foam) has been in place since the original plant construction. At the time of installation, this material satisfied the applicable codes and regulations. However, polyethylene foam does not provide the fire resistance required by Appendix R (current requirements). The gaps containing the polyethylene foam are not readily visible because they are covered with a coating of silicone caulk and painted. As a result, they were not discovered when the walk-downs to ensure compliance with Appendix R were conducted.

The existence of the unqualified seismic gap fill material was not reported to the NRC within thirty days from discovery as a result of inadequate programmatic controls to ensure that deficient conditions are promptly evaluated for reportability.

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 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		0	0	7	0	0 4 OF 0 6

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

Corrective Actions:

The hole in the Cable Spreading Room floor was repaired on April 25, 1988 using a silicone foam, providing a 3-hour fire rating.

A modification has been initiated to upgrade the seismic gap fill material using silicone foam with a silica sand filler. This modification is expected to be completed by August 1988 on Unit 2 and prior to restart on Unit 3.

A meeting was held by the Plant Manager in April 1988 to discuss the failure to report the deficient fill material to the NRC within 30 days. The importance of being sensitive to NRC reporting requirements at all times was discussed. The need to notify the Compliance Engineer or a member of Senior Plant Staff of any abnormal or deficient condition was stressed. (The Compliance Engineer position was filled in November 1987). A memorandum was subsequently sent from the Plant Manager to the Project Manager and Support Manager requesting that their personnel notify the Shift Technical Advisor (STA) immediately of any abnormal conditions that they discover concerning the Technical Specifications. If appropriate, the STA will initiate a Suspected Licensee Event Report Form.

The creation of a new regulatory organization under the Superintendent-Technical earlier this year has improved identification of reportable events. The organization is supervised by the Regulatory Engineer whose primary focus is on compliance issues.

The Nuclear Group of Philadelphia Electric Company has recognized the need to strengthen its controls for dispositioning potentially reportable events/conditions. A new process for identifying and dispositioning potentially reportable items has been developed and is being reviewed by the Nuclear Group management. The entire Nuclear Group (nuclear stations, Nuclear Engineering, Nuclear Services and Nuclear Quality Assurance) will participate in this process, which will establish a uniform approach for the identification and evaluation of potentially reportable items. A manual will be issued to provide guidance on reportability requirements and training will be conducted to support the new process.

Improvements have been made, in the interim, in the Nuclear Engineering Department-Engineering Division. On April 11, 1988 the Engineering Division instituted a new written process for handling matters of a licensing/regulatory nature on operating nuclear plants. This process addresses, in part, potentially reportable events. Previously, the Engineering Division did not have a formal process for 10 CFR 59.72 and 50.73 reportability evaluations. The new process requires the immediate initiation

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   8   8   -   0   0   7   -   0   0   0   5   OF   0   6	LER NUMBER (5)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	

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

of a reportability evaluation form, and immediate notification of the Engineering Division Licensing Section when potentially reportable conditions are identified. If appropriate, a Suspected Licensee Event Report form (from Peach Bottom Administrative Procedure A-7) will be completed and forwarded to the Nuclear Support Division Licensing Section (which is responsible for Licensee Event Reports).

EIIS Codes:

Systems referred to in this LER: KP-Fire Protection, LW-Cardox Fire Suppression, KG-Reactor Building Closed Cooling Water (Non-Essential Service Water) and AD-Reactor Recirculation. Components referred to in this LER: CBL-Cable, PL-Panel, ANN-Annunciators, MG-Motor Generator set, FAN-Fan and DET-Detectors.

Previous Similar Occurrences:

LERs 2-85-08 and 3-85-11 reported fire barrier deficiencies. LERs 2-87-32, 2-87-28, 2-87-27, 2-85-21, 2-85-13, 2-85-28, 3-85-18, 3-85-20 and 3-85-21 reported events significantly later than required.

Tracking Codes: A10 - Failure to Properly Perform Inspection  
(hole in Cable Spreading Room Floor)

E1 - Breakdown of Administrative Controls  
(failure to report deficiencies in 30 days)

B1 - Code/Regulation Compliance Inadequate  
(unqualified fill material in gaps)

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 8 8 - 0 0 7 - 0 0 0 6 OF 0 6	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

Attachment  
LER 2-88-07

<u>Barrier Designation</u>	<u>Room</u>	<u>Fire Area*</u>
RW2-116-105-E	Unit 2 RBCCW .....	2
RW2-116-ST-24-E & W	Stairway 24, elev. 116'-135' ....	4
RW3-116-162-E	Unit 3 RBCCW .....	2
RW2-135-206-F	Unit 2 Recirc M-G Set .....	4
RW2-135-206-E	Unit 2 Recirc M-G Set .....	4
RW3-135-258-E	Unit 3 Recirc M-G Set .....	2
TBC-150-302-1-W	Cable Spreading Room .....	25
TBC-150-302-2-W	Cable Spreading Room .....	25
TBC-150-302-2-E	Cable Spreading Room .....	25
TBC-150-302-1-E	Cable Spreading Room .....	25
TBC-150-302-2-F	Cable Spreading Room .....	25
TBC-150-302-1-F	Cable Spreading Room .....	25
TBC-150-302-2-C	Cable Spreading Room .....	25
TBC-150-302-1-C	Cable Spreading Room .....	25
RWC-165-381-E	Remote Shutdown Panel .....	25
RWC-165-381-F	Remote Shutdown Panel .....	25
RWC-165-381-W	Remote Shutdown Panel .....	25
RWC-165-382-F	Unit 3 Recirc M-G .....	26
	Set Fan	
RWC-165-375-F	Unit 2 Recirc M-G .....	27
	Set Fan	

Notes

\*The Peach Bottom Fire Protection Program report provides details of fire areas.

Acronym Definitions

RBCCW: Reactor Building Closed Cooling Water

Recirc M-G: Reactor Recirculation System Motor-Generator