

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)										DOCKET NUMBER (2)										PAGE (3)	
Peach Bottom Atomic Power Station - Unit 2										0 5 0 0 0 2 1 7 1 7										1 OF 0 1 3	
TITLE (4)																					
Inoperable Fire Barrier Penetrations																					
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(S)			DOCKET NUMBER(S)									
07	25	85	85	0008		01	09	1985	PBAPS Unit 3			0 5 0 0 0 2 1 7 1 8									
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																					
OPERATING MODE (9)		N		20.402(a)		20.406(a)		80.73(a)(2)(H)		73.71(a)											
POWER LEVEL (10)		0.5, 8		20.406(a)(1)(U)		80.73(a)(2)		80.73(a)(2)(H)		73.71(a)											
				20.406(a)(1)(H)		80.73(a)(2)		80.73(a)(2)(H)		OTHER (Specify in Abstract below and in Test, NRC Form 366-A)											
				20.406(a)(1)(U)		X 80.73(a)(2)(U)		80.73(a)(2)(H)(A)													
				20.406(a)(1)(H)		80.73(a)(2)(H)		80.73(a)(2)(H)(B)													
				20.406(a)(1)(H)		80.73(a)(2)(H)		80.73(a)(2)(H)													
LICENSEE CONTACT FOR THIS LER (12)												TELEPHONE NUMBER									
NAME												AREA CODE									
W. C. Birely, Senior Engineer - Licensing Section												2 1 5 8 4 1 7 5 0 4 1 8									
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							
YES (If you complete EXPECTED SUBMISSION DATE)										X NO											

ABSTRACT (Limit to 1000 words, i.e., approximately fifteen single-space typewritten lines) (16)

Abstract: 2-85-08, Rev. 1

On July 25, 1985, qualification tests were performed on fire barrier penetrations containing ceramic fiber-polyurethane foam. Test results indicated that this material was unacceptable as a fire barrier when installed in a certain configuration. This material was subjected to a fire test followed by a hose stream test (ASTM E814-81). The penetration failed the hose stream test in those cases where the ceramic fiber was installed on the cold side of the test wall and the polyurethane foam was installed on the fire side of the test wall. Tests performed in the opposite configuration (ceramic fiber on the fire side, polyurethane foam on the unexposed side) proved the barriers acceptable for both the fire and hose stream tests.

A review of the materials used in the Peach Bottom fire barrier penetrations completed in July, 1985 indicated that 35 penetrations contain the ceramic fiber-polyurethane foam material in the unqualified configuration. Further review completed on August 29, 1985 revealed that an additional 19 unqualified fire barrier penetrations of this configuration exist. In accordance with Technical Specifications, fire detectors were verified operable and hourly fire watch patrols were established for the unqualified fire barriers.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMS NO 3190-0104

EXPIRES 8/31/86

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		05	000277	85-008-01	02	OF	03

TEXT (If more space is required, use additional NRC Form 368A (1))

Description of the Event:

On July 25, 1985, ongoing tests of the fire barrier penetrations consisting of a 3-inch layer of ceramic fiber and a 9-inch layer of polyurethane foam determined this material to be inadequate for use as a 1-hour fire barrier when installed in a penetration in a certain configuration.

Fire barrier material is tested in accordance with ASTM E814-81 standards. ASTM E814-81 requires that fire barrier material withstand a fire test and a hose stream test to be given a 3-hour fire rating. Previous tests indicated that the configuration (consisting of ceramic fiber installed on the cold side of the test wall and polyurethane foam installed on the fire side of the test wall) passed the fire test but failed the hose stream test and therefore could not be given a 3-hour rating. However, the tests suggested that this configuration was adequate for a 1-hour rating. As a result, an exemption from the requirements of 10 CFR 50 Appendix R, Section III.M, was requested on December 2, 1983 to permit use of this penetration seal configuration in walls separating fire areas having a fixed combustible loading on one side which is less than 1-hour. Ceramic fiber was installed, in the plant, towards the space with the higher combustible loading. However, further testing performed on July 25, 1985 indicated this configuration was inadequate for a 1-hour rating.

This results in Peach Bottom Units 2 and 3 being in noncompliance with Technical Specification 3.14.D.2 which requires that all fire barrier penetrations separating portions of safety-related systems, required to ensure safe shutdown capability, shall be functional.

A review of the materials used in the Peach Bottom fire barrier penetrations was performed on July 25, 1985. This review indicated that 35 penetrations contain the ceramic fiber-polyurethane foam material in the unqualified configuration. Further review completed on August 29, 1985 revealed that an additional 19 fire barrier penetrations of this configuration exist.

In accordance with Technical Specifications, fire detectors were verified operable and hourly fire watch patrols were established for the affected areas.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMS NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Peach Bottom Atomic Power Station - Unit 2	05000277	85	008	01	03	OF	03

TEXT (if more space is required, use additional NRC Form 266A) (17)

Consequences of the Event:

Fire detectors in areas adjacent to the unqualified fire barriers, which were verified operable, would have provided early detection in the event of a fire. Therefore, the consequences of this event are considered minimal.

Cause of the Event:

On November 3, 1983, the ceramic fiber-polyurethane foam material was tested for a 3-hour rating and failed by a small margin. The results suggested that enough material remained after the 3-hour furnace test that the material would pass a 1-hour rating test. However, the results of a 1-hour confirmation test performed on July 25, 1985, indicated that sufficient material did not remain intact to qualify it for a 1-hour rating.

Corrective Actions:

Roving fire watch patrols were immediately established to monitor all areas with unqualified fire barrier penetrations. These fire watch patrols will be maintained as necessary until the penetration upgrades are completed.

A review of completed fire detector surveillance tests was performed. This review verified that all fire detectors in the areas affected by the first 35 unqualified barriers were proven operable within the past six months. A similar review was performed for the additional 19 unqualified fire barrier penetrations and revealed that one affected fire detection system had not been tested within six months. A dedicated fire watch was immediately established for this barrier. This fire detection system was then tested and proven operable. The dedicated fire watch that had been established was then replaced with a roving hourly fire watch patrol.

Instructions were issued on August 6, 1985 specifying the work to be performed to upgrade the first 35 unqualified barriers. Upgrading of those barriers is in progress. Instructions were issued on September 13, 1985 specifying the work to be performed to upgrade the additional 19 unqualified fire barrier penetrations.

Previous Similar Occurrences

LER 3-85-11 concerned missing fire barrier seals.

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

September 19, 1985

Docket No. 50-277

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

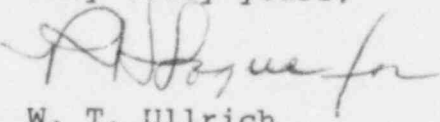
SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Unit 2

This revised LER (Rev. 1) concerns inoperable fire barrier penetrations. Revisions are indicated by a vertical bar in the margin. Revision of this LER was necessitated by the discovery of 19 additional inoperable penetrations. The Cause, Consequences, and Corrective Actions sections were revised for clarity.

Reference:	Docket No. 50-277
Report Number:	2-85-08
Revision Number:	01
Event Date:	July 25, 1985
Report Date:	September 19, 1985
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).

Very truly yours,


W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC
T. P. Johnson, NRC Resident Inspector

IE22
11