

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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KEN POWERS  
PLANT MANAGER

April 8, 1992

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 the Primary Containment Isolation System Group III isolation being defeated due to a procedural deficiency.

Reference: Docket Nos. 50-277  
50-278  
Report Number: 2-92-001  
Revision Number: 00  
Event Date: 03/10/92  
Report Date: 04/08/92  
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)(ii)(B) and 10 CFR 50.73 (a)(2)(v).

Sincerely,

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

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.2 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-330), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20548, AND TO THE PAPERWORK REDUCTION PROJECT (330-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Peach Bottom Atomic Power Station - Units 2 and 3 DOCKET NUMBER (2) 0 5 0 0 0 2 7 7 1 OF 0 4 PAGE (3) 1 OF 0 4

TITLE (4) Primary Containment Isolation System Group "I" Isolation was Defeated due to a Procedural Deficiency

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	SYSTEM NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
03	10	92	92	001		03	04	92	Peach Bottom - Unit 3		0 5 0 0 0 2 7 8
											0 5 0 0 0

OPERATING MODE (9) N  
POWER LEVEL (10) 0 7 3

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)

20.402(b)	20.405(i)	50.734(i)(1)(v)	73.71(b)
20.405(a)(1)(iii)	50.38(i)(1)	50.734(i)(2)(iv)	73.71(c)
20.405(a)(1)(iv)	50.38(i)(2)	50.734(i)(2)(iv)	OTHER (Specify in Abstract Below and in Text, NRC Form 308A)
20.405(a)(1)(v)	50.734(i)(2)(i)	50.734(i)(2)(viii)(A)	
20.405(a)(1)(vi)	50.734(i)(2)(ii)	50.734(i)(2)(viii)(B)	
20.405(a)(1)(vii)	50.734(i)(2)(iii)	50.734(i)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Albert A. Fulvio, Regulatory Engineer TELEPHONE NUMBER 7 1 1 7 4 5 1 6 1 - 1 7 1 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)

YES (if yes, complete EXPECTED SUBMISSION DATE)  NO  X

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen copies below typewritten text) (16)

On 3/10/92, it was determined that the Primary Containment Isolation System (PCIS) Logic System Functional Surveillance Test (LSFT) for the Group II isolation was performed in such a manner that it defeated the automatic capability of the PCIS Group III channels. Although this test method was in place since a 1989 procedure revision, the portion that defeated the PCIS Group III isolation logic was only performed one time on each unit when the PCIS Group III isolation capability was required to be operable. The cause of the event has been determined to be that the LSFT procedure reviews during the 1989 revision did not adequately address the requirements specified in the Updated Final Safety Analysis Report. This was attributed to the lack of 10 CFR 50.59 review training and a less than adequate 10 CFR 50.59 review process existing in 1989. No actual safety consequences occurred as a result of this event. An alternate method to test the logic will be developed. The LSFT procedures used for other safety systems are currently being evaluated for similar deficiencies. The inadequate formal process and training for 10 CFR 50.59 reviews had been identified and corrected by 1/1/90. There were no previous similar events identified.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESP. TO COMPLY WITH THIS INFORMATION COLLECTION REL. 7 - 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-330) U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20545 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104) OFFICE OF MANAGEMENT AND BUDGET WASHINGTON, DC 20503.

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 2 and 3	DOCKET NUMBER (2) 0 5 0 0 0 2 7 7 9 2	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		0 0 1	0 0 0	0 0 0	2	DF 0 14

TEXT (If more space is required, use additional NRC Form 306 (a) (17))

### Requirements of the Report

This report is being submitted to satisfy the requirements of 10 CFR 50.73 (a)(2)(ii)(B) describing conditions which were potentially outside the design basis of the plant and 10 CFR 50.73 (a)(2)(v) due to a potential loss of a safety system function.

### Unit Conditions at Time of Event

On 10/16/91, Unit 2 was in the "RUN" mode at 73% of thermal reactor (EIIS:EA) power. On 5/16/90, Unit 3 was in the "RUN" mode at 85% power. There were no systems, structures, or components that were inoperable that contributed to the event.

### Description of the Event

On 3/10/92, it was determined that the Primary Containment Isolation System (PCIS) (EIIS:JM) Logic System Functional Surveillance Test (LSFT) for the Group III isolation was performed in such a manner that it defeated the automatic capability of the PCIS Group III channels. Defeating the automatic capability is contrary to the primary containment design criteria specified in the Updated Final Safety Analysis Report (UFSAR). The UFSAR states that "Any one intentional bypass, maintenance operation, calibration operation, or test to verify operational availability does not impair the functional ability of the isolation control system to respond correctly to essential monitored variables". Since the automatic capability was defeated during the test, this would have prevented the PCIS Group III isolation logic from fulfilling its design basis and therefore placed the plant in a condition outside its design basis. The PCIS Group III isolation trips the normal reactor building ventilation fans, isolates the reactor building and various process lines which penetrate primary containment, and initiates the start of the Standby Gas Treatment System (SBGTS) (EIIS:BH). At the time when the procedure defeated both channels, the normal ventilation system would not have tripped and the SBGTS would not have started without operator action. In addition, the Instrument Nitrogen Compressor Suction and Oxygen Gas Sample Isolation Valves were in the open position and would not have automatically isolated their respective primary containment penetrations without Operator action. The PCIS Group III isolation is intended to provide timely protection against the consequences of accidents involving the gross release of radioactive material from the fuel and nuclear system process barriers. Although this test method was in place since a 1989 procedure revision, the portion that defeated the PCIS Group III isolation logic was only performed one time on each unit when the PCIS Group III isolation capability was required to be operable. The first time was on Unit 3 on 5/16/90 while at 85% power. The second occurrence was on Unit 2 on 10/16/91 while at 73% power. The automatic feature of the PCIS Group III isolation logic was defeated as part of the LSFT for approximately 45 minutes on each occasion. Prior to performance of the

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FOR RECORDS AND REPORTS MANAGEMENT BRANCH (F-830), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 2 and 3	DOCKET NUMBER (2) 0   5   0   0   0   2   7   7   9   2	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		— 0   0   1	— 0   0	0   3	OF	0   4

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

steps which defeated the isolation, the Reactor Operator (RO) was made aware via a note in the test of this bypass and was provided with instructions to take manual action if a transient occurred during the test. The performance of this test on the other times was accomplished when primary and secondary containment were not required to be operable. The NRC was notified of this event via ENS on 3/10/92 at 1425 hours.

#### Cause of the Event

The cause of the event has been determined to be that the LSFT procedure reviews during the 1989 revision did not adequately address the requirements specified in the UFSAR. The root cause of this event was that no formal 10 CFR 50.59 review was performed on the proposed procedure revision. This was attributed to the lack of 10 CFR 50.59 review personnel training and a less than adequate 10 CFR 50.59 review process existing at the time of the procedure revision. Having no formalized process or training to mandate such reviews had been identified and was corrected by 1/1/90. 10 CFR 50.59 reviews by qualified reviewers are now required for procedure revisions.

In addition, at the time that the new test method was initiated in 1989, plant staff personnel believed that it was appropriate to bypass the isolation during this LSFT rather than remove the normal ventilation system from service, which had the potential to result in a PCIS Group I Main Steam Isolation Valve isolation and reactor scram upon restoration.

#### Analysis of Event

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

The consequences are considered minimal due to the fact that the automatic feature of the PCIS Group III isolation logic was only defeated for approximately 45 minutes on each occasion. Also, prior to performance of the steps which defeated the isolation channels, the RO was made aware via a note in the test of this bypass and was provided with instructions to take immediate manual action if a transient occurred during the test. The Operator actions would provide timely protection against the consequences of accidents involving the gross release of radioactive material from the fuel and nuclear system process barriers. The actual performance of this test only occurred on one occasion on each unit when primary and secondary containment were required. Because this test is a major plant evolution in itself, no other major plant activities were being performed at this time.

#### Corrective Actions

After discovery of the event, the PCIS LSFT procedure was deleted. An alternate method to test the logic will be developed and incorporated into the procedure used during the next required test performance. The LSFT procedures



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION 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 20655, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 2 and 3	DOCKET NUMBER (2) 0   5   0   0   0   2   7   7	LER NUMBER (6)			PAGE (3)	
		YEAR 9   2	SEQUENTIAL NUMBER -   0   0   1	REVISION NUMBER -   0   0	0   4	OF 0   4

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

used for other safety systems are currently being evaluated for similar deficiencies. This review will be completed prior to the next performance of each procedure.

The event has been discussed with the involved individuals. The pertinent information from this event will be provided to the appropriate members of the technical staff.

The inadequate formal process and training for 10 CFR 50.59 reviews had been identified, and was corrected by 1/1/90. 10 CFR 50.59 reviews by qualified persons are now required for procedure revisions.

Pre-Event Similar Events

no previous similar events identified which involved the testing of protection circuitry in this method.