

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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DELTA, PA 17314

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KEN POWERS  
PLANT MANAGER

June 3, 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 an Intermediate Range monitor spike which resulted in a reactor scram due to a defective undervessel connector.

Reference: Docket No. 50-278  
Report Number: 3-92-003  
Revision Number: 00  
Event Date: 05/05/92  
Report Date: 06/03/92  
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,

cc: J. J. Lyash, USNRC Senior Resident Inspector  
T. T. Martin, USNRC, Reg 1

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LICENSEE EVENT REPORT (LER)

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-30) U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20585, 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 3**      DOCKET NUMBER (2): **05000278**      PAGE (3): **1 OF 03**

TITLE (4): **Intermediate Range Monitor Spike which resulted in a Reactor Scram due to a Defective Undervessel Connector**

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
05	04	92	92	003	0	06	03	92	
								DOCKET NUMBER(S):	
								050000	
								050000	

OPERATING MODE (9): **N**

POWER LEVEL (10): **071**

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(a)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(a)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract Below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(vii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12):

NAME: **Albert A. Pulvio, Regulatory Supervisor**

TELEPHONE NUMBER: **717456-7014**

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):

YES (if you complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15):

MONTH	DAY	YEAR

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

On 5/5/92 at 1230 hours, the Reactor Protection System (RPS) initiated a full reactor scram signal. The full reactor scram was a result of a "B" RPS channel half scram signal in conjunction with a "A" RPS channel half scram signal already inserted. The "B" RPS channel half scram signal was a result of a "B" Intermediate Range Monitor (IRM) failed upscale. The "A" RPS channel half scram was previously inserted due to having two IRMs in the "A" RPS channel inoperable. The cause of the "B" IRM channel spiking was low insulation resistance in the signal channel which was traceable to foreign material in the undervessel cable connector. Current-Voltage and Time Domain Reflectometry measurements were performed on all defective IRM channels. A quality improvement team had been formed to address chronic Nuclear Instrumentation failures. No actual safety consequences occurred as a result of this event. No previous similar LERs have been identified.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-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 3	DOCKET NUMBER (2) 0 6 0 0 0 2 7 8 9 2 -	LER NUMBER (6)			PAGE (8)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0 0 3	- 0 0	0 2	OF	0 3	

TEXT (If more space is required, use additional NRC Form 386A's) (7)

Requirements for the Report

This report is submitted to satisfy the requirements of 10 CFR 50.73(a)(2)(iv) due to an unplanned Engineered Safety Feature Actuation.

Unit Conditions at Time of Event

A Unit 3 Shutdown with control rods was in progress and Reactor power was approximately 1%. There were no other systems, structures, or components that were inoperable that contributed to the event.

Description of Event

On 5/4/92 at 1952 hours, the Reactor mode switch was moved from the RUN to STARTUP position during a Shutdown with control rods for maintenance activities. An "A" Reactor Protection System (RPS) (EIIS:JC) channel half scram was manually inserted due to two inoperable Intermediate Range Monitors (IRM) (EIIS:MON) in the "A" RPS channel. The "A" RPS channel half scram was inserted per the Technical Specifications since the minimum number of operable IRMs could not be maintained.

On 5/5/92 at 0230 hours, the RPS initiated a full reactor (EIIS:RCT) scram signal. The full reactor scram was a result of a "B" RPS channel half scram signal in conjunction with a "A" RPS channel half scram signal already inserted. The "B" RPS channel half scram signal was a result of a "B" IRM failed upscale. The NRC was notified of the event via ENS at 0255 hours.

Cause of Events

The cause of the event has been determined to be a spike of the "B" IRM while the "A" RPS channel half scram signal was already inserted.

The cause of the "B" IRM channel spiking was low insulation resistance in the signal channel which was traceable to foreign material in the undervessel cable connector.

Analysis of Event

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

The actuation functioned properly during this event. Had an IRM failure occurred during a higher level of power operation (RUN Mode), no scram would have occurred since the IRMs would have been bypassed.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 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) <b>Peach Bottom Atomic Power Station Unit 3</b>	DOCKET NUMBER (2)  0   5   0   0   0   2   7   8   9   2	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
			— 0   0   3	— 0   0	0   3	OF	0   3

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

Corrective Action

Current-Voltage and Time Domain Reflectometry measurements were performed on all defective IRM channels. Defective detector and undervessel connectors were replaced prior to returning the IRM channels to operable status.

A Quality Improvement (QI) Team had been formed early in the year to address chronic Nuclear Instrumentation failures. Recommendations from the QI Team will be reviewed and implemented as appropriate.

Previous Similar Events

No previous similar LERs have been identified involving IRM spiking due to defective undervessel cable connectors.