

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 2 1 7 7	PAGE (3) 1 OF 0 4
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TITLE (4)  
RPS Scram Occurred as a Result of Grounding a Jumper Which Caused a Fuse to Blow While Performing a Surveillance Test

EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0 5	1 2	8 8	8 8	0 1 1	0 0	0 6	1 3	8 8			0 5 0 0 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)											

OPERATING MODE (9) N	POWER LEVEL (10) 0 0 0	20.402(b)	20.406(e)	X	50.73(a)(2)(iv)	73.71(b)
		20.406(a)(1)(i)	50.38(e)(1)		50.73(a)(2)(v)	73.71(e)
		20.406(a)(1)(ii)	50.38(e)(2)		50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 356A)
		20.406(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(vii)(A)	
		20.406(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)	
		20.406(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME W. C. Birely, Senior Engineer - Licensing Section	TELEPHONE NUMBER 2 1 5 8 4 1 - 5 0 4 8
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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 yes, 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)

Abstract:

At 0928 hours on May 12, 1988, during the performance of Surveillance Test, the Unit 2 Reactor Protection System (RPS) unexpectedly generated a full scram signal. Since the unit was in the Cold Shutdown Condition with all of the control rods fully inserted, no control rod motion resulted. The unexpected actuation of an engineered safety feature (ESF) makes this event reportable pursuant to 10 CFR 50.73 (2)(a)(iv). The scram was caused by the inadvertent grounding of a test jumper which caused a fuse to blow in a Reactor Protection System (RPS) logic circuit. A procedure deficiency allowed the loss of one fuse to result in a full scram. The consequences of this event are minimal, as no control rod motion occurred, no other ESF actuated and none were impaired. The fuse was replaced at 1358 hours. To prevent recurrence of the event, a mock-up of a control panel will be provided for training purposes, appropriate Surveillance Tests and Routine Tests will be revised to require draining of the scram discharge volume as a prerequisite to performing these tests, and a modification is being considered to install test connections at designated test points.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 2	DOC# ST NUMBER (2) 0 5   0   0   0   2 7   7 8   8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		88	0111	010	02	OF 04

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

Unit Conditions Prior to the Event:

Unit 2 was in Cold Shutdown, with the "B" loop of shutdown cooling in service.

The scram discharge volume was full.

Description of the Event:

At 0928 hours on May 12, 1988, during performance of a surveillance test (ST-1.18A, "RPS 'A' Logic Scram Reset Timers Functional"), the Unit 2 Reactor Protection System (RPS) unexpectedly generated a full scram signal. Since the unit was in Cold Shutdown with all of the control rods fully inserted, no control rod motion resulted. The unexpected actuation of an engineered safety feature makes the event reportable pursuant to 10CFR50.73(a)(2)(iv). The events leading to and following the actuation are described below.

At 0910 hours, a manual scram which had been initiated to perform maintenance was reset to allow performance of ST-1.18A. The scram discharge volume (SDV) was full as the result of the manual scram, which actuated the SDV high level switches. The SDV drain and vent valves were not opened due to a problem which was suspected with the valves on May 11. Thus, the SDV bypass switch was used to allow reset and prevent another scram from immediately recurring. ST-1.18A did not require the SDV to be drained.

Once the manual scram was reset, the Test Engineer commenced performing the ST. The procedure requires the installation of a jumper between two contacts on relay 5A-K23A. While preparing to install the jumper, the Test Engineer inadvertently grounded the jumper, causing fuse 5A-F23A in panel 20C15 to blow. Because the SDV high level switches were actuated, loss of fuse 5A-K23A de-energized scram discharge volume bypass relays 5A-K19A and 5A-K19C, causing the generation of the RPS scram signal.

## 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   1   1	-   0   0	0   3	OF 0   4

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

Consequences of the Event:

The consequences of this event were determined to be minimal. No control rod motion occurred, no other ESFs actuated, and none were impaired. In addition, this event would not have occurred during power operation because the SDV at power would have been drained.

Cause of the Event:

This event was caused by the Test Engineer inadvertently grounding the circuit as he applied the jumper, thereby blowing the fuse. A deficiency in the procedure which allowed the performance of this test without the SDV being drained, contributed to the event.

Corrective Actions:

The fuse was replaced at 1358 hours on May 12, 1988. The scram discharge volume was drained and the scram was reset. ST-1.18A was successfully completed the next day. The Test Engineer was counseled on the importance of the careful use of jumpers.

Actions to Prevent Recurrence:

Appropriate plant personnel, as designated by the various plant superintendents, will be trained in a "mock-up" of a control panel to become familiar with performing tests and troubleshooting under various conditions to improve their ability to avoid potential grounding situations. This training will be incorporated into the Technical Staff and Management Training Program, and the Continuing Training Program for the designated plant personnel. The mock up panel will be constructed by October 1, 1988 and training will commence by December 1, 1988.

A modification is being considered to install permanent test lead connections at selected points in panels to facilitate the connection of leads during testing.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 2	DOCKET NUMBER (2) 0 5 1 0   0 0   2 7 7 8 8	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		88	0 1 1 1	0 0	0 4	OF 0 4

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

ST 1.18A and ST 1.18B will be revised to include prerequisites that the scram discharge volume must be drained prior to the performance of this test. The procedure will also be revised to include human factor steps to reduce movement of the individual performing the test while inside the control panel applying the jumper. These procedure revisions will be completed by July 15, 1988.

A review of the Surveillance Tests and Routine Tests has been performed to identify those procedures that allow the scram discharge volume scram signal to be bypassed while leads or jumpers are used on the circuits that energize the scram discharge volume bypass relays (5A-K19A through 5A-K19D). The procedures which contain this potential scram condition will be revised to include a prerequisite requiring that the scram discharge volume be drained. The procedure revisions will be completed by July 15, 1988.

EIIS Codes:

The EIIS codes for the systems described in this report are: JC - Plant Protection System (RPS); AA - Control Rod Drive System.

The IEEE codes for the components described in this report are: TMR - timer; ROD - (control) rod; V-valve; PL - panel; CHA - channel; and FU - fuse.

Previous Similar Events:

Cause Code: A - Personnel Error

Peach Bottom LERs 2-87-25, 3-86-02, 2-85-06, 3-85-17, 3-85-21 3-85-22 and 3-85-30 involved actuations due to personnel errors while performing surveillance tests.

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June 13, 1988

Docket No. 50-277

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Washington, DC 20555

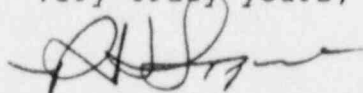
SUBJECT: Licensee Event Report  
Peach Bottom Atomic Power Station - Unit 2

This LER concerns an unexpected scram signal due to a personnel error during a surveillance test.

Reference: Docket No. 50-277  
Report Number: 2-88-11  
Revision Number: 00  
Event Date: May 12, 1988  
Report Date: June 13, 1988  
Facility: Peach Bottom Atomic Power Station  
RD 1, Box 208A, Delta, PA 17314

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(iv).

Very truly yours,



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

cc: W. T. Russell, Administrator, Region I, USNRC  
T. P. Johnson, NRC Senior Resident Inspector  
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INPO Records Center

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11