



PECO ENERGY

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U. S. Nuclear Regulatory Commission
Washington, DC 20555

Docket No. 50-278

SUBJECT: Licensee Event Report, Peach Bottom Atomic Power Station-Unit 3

This LER concerns a unplanned scram on a Main Turbine trip.

Reference:	Docket No. 50-278
Report Number:	3-95-007
Revision Number:	00
Event Date:	12/02/95
Report Date:	12/26/95
Facility:	Peach Bottom Atomic Power Station 1848 Lay Road, Delta, PA 17314

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

Sincerely,

GDE/GAJ:gaj

enclosure

- cc: R. A. Burricelli, Public Service Electric & Gas
 R. R. Janati, Commonwealth of Pennsylvania
 INPO Records Center
 T. T. Martin, US NRC, Administrator, Region I
 R. I. McLean, State of Maryland
 W. L. Schmidt, US NRC, Senior Resident Inspector
 A. F. Kirby III, DelMarVa Power
 H. C. Schwemm, VP - Atlantic Electric

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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-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, 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 5 0 0 0 2 7 8** PAGE (3) **1 OF 0 3**

TITLE (4) **Main Turbine Trip Caused Full Reactor Scram**

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		DOCKET NUMBER(S)										
1	2	0	2	9	5	9	5	0	0	7	0	0	0	0	0	0	0	0	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)

20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.405(c)	50.38(c)(1)	50.38(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(ix)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
												<input checked="" type="checkbox"/>									

POWER LEVEL (10) **110.0**

LICENSEE CONTACT FOR THIS LER (12)

NAME **Anthony J. Wasong, Manager- Experience Assessment** TELEPHONE NUMBER **7 1 7 4 5 6 1 7 0 1 4**

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) MONTH **12** DAY **02** YEAR **95**

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

On 12/02/95, an unexpected Main Turbine trip occurred and caused closure of the Turbine Stop Valves which initiated a full reactor scram. Immediately following the scram, Primary Containment Isolation System (PCIS) Group II/III isolations occurred as expected. The Reactor Protection System scram and PCIS logics were reset. Troubleshooting revealed that the Mechanical Trip Solenoid Valve's coil was momentarily energized due to a combination of two grounds in the DC electrical power system. The first was an intermittent ground on a terminal strip associated with the Mechanical Trip Solenoid. The second was a momentary ground induced during the performance of a Routine Test (RT). This ground occurred during the installation of grounded test equipment onto a relay contact. The RT required the technician to install test equipment in a location which was difficult to access. The simultaneous occurrence of these two grounds provided enough DC current to pickup the Mechanical Trip Solenoid causing a Main Turbine Trip. The terminal strip which caused the initial ground was replaced and generic implications will be considered. The RTs used to perform this type testing on the Diesel Generators will be evaluated to identify if alternative testing methods are possible. RT revisions will be implemented as appropriate. The pertinent information from this event will be provided to the appropriate Station personnel. No previous similar events have been identified.

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-830), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, 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 5 0 0 0 2 7 8	LER NUMBER (6)			PAGE (3)	
		YEAR 9 5	SEQUENTIAL NUMBER - 0 0 7	REVISION NUMBER - 0 0	0 2	OF 0 3

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

Requirements of the Report

This report is being submitted pursuant to 10 CFR 50.73 (a)(2)(iv) due to Engineered Safety Feature (ESF) actuations.

Unit Conditions at Time of Event

Unit 3 was in the "RUN" mode at 100% of rated thermal reactor power. There were no systems, structures, or components that were inoperable that contributed to the event.

Description of the Event

On 12/02/95 at 0145 hours, an unexpected Main Turbine trip occurred and caused closure of the Turbine Stop Valves. Closure of these valves is an input to the Reactor Protection System (RPS) (EHS:JC) logic which initiated a full reactor scram. Immediately following the scram, Primary Containment Isolation System (PCIS) (EHS:JM) Group II/III isolations occurred as expected when Reactor water level momentarily dropped below 0" as a result of void collapse upon insertion of the control rods. The RPS scram logic was reset at 0153 hours and the PCIS logics were reset at 0205 hours. Affected systems were restored to the appropriate configuration. The NRC was notified of the event at 0346 hours.

Cause of the Event

The cause of the scram was that the Turbine Stop Valves unexpectedly closed causing a Main Turbine trip. Troubleshooting revealed that the Mechanical Trip Solenoid Valve's coil was momentarily energized due to a combination of two grounds in the DC electrical power system.

The first was a intermittent ground on a terminal strip associated with the Mechanical Trip Solenoid. This ground occurred because the terminal strip was corroded and cracked causing a short to the terminal strip mounting screw. The second was a momentary ground induced during the performance of a Routine Test (RT)-O-052-253-2 "E3 DIESEL GENERATOR INSPECTION POST MAINTENANCE FUNCTIONAL TEST" on the E-3 Diesel Generator's Low Speed Relay. This ground occurred during the installation of grounded test equipment onto a relay contact by an Instrument & Control (I&C) Technician (Utility:Non-Licensed). The RT required the technician to install test equipment in a location which was difficult to access. The simultaneous occurrence of these two grounds provided enough DC current to pickup the Mechanical Trip Solenoid causing a Main Turbine Trip. The station was unable to identify the location of the first ground prior to the event due to the intermittent nature of the ground.

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FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 2 7 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 5	— 0 0 7	— 0 0	0 3	OF 0 3

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

Analysis of Event

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

All isolations and initiations functioned per design. Had this event occurred at another power level, isolations and initiations would have also functioned per design.

Corrective Actions

After the scram occurred, the appropriate PCIS and RPS scram logics were reset and the affected systems were reset to the appropriate configuration.

The Mechanical Trip Solenoid Valve terminal strip which caused the initial ground was replaced.

An evaluation will be performed to address the generic implications of the failed terminal strip. Corrective actions will be implemented as appropriate pending the results of the evaluation.

The RTs used to perform this type testing on the Diesel Generators will be evaluated to identify if alternative testing methods are possible. RT revisions will be implemented as appropriate pending the results of the evaluation.

The event has been discussed with the involved individuals. The pertinent information from this event will be provided to the appropriate Station personnel to emphasize the potential consequences of test equipment installation, to stress the importance of evaluating alternative methods of testing when access is difficult, and to heighten the awareness of the station to consider the ramifications of performing plant testing and other evolutions when an intermittent or solid battery ground exists.

Previous Similar Events

No previous similar events have been identified which involved unexpected equipment actuations due to the combination of two or more grounds.