PEACH BOTTOM—THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY
PEACH BOTTOM ATOMIC POWER STATION
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D. M. Smith
Vice President

October 25, 1989
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 Engineered Safety Feature (ESF) actuation as a result of not following plant approved procedures.

Reference:	Docket No. 50-278
Report Number:	3-89-004
Revision Number:	00
Event Date:	09/26/89
Report Date:	10/25/89
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).

Sincerely,

cc: T. P. Johnson, USNRC Senior Resident Inspector
W. T. Russell, USNRC, Region I

IE22
1/1

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)
Primary Containment Isolation of the Reactor Water Cleanup System Due to Failure to Follow Procedures While Investigating a Malfunctioning Differential Pressure Indicator

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)
0 9	2 6	8 9	8 9	0 0 4	0 0	1 0	2 5	8 3		0 5 0 0 0
										0 5 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)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
T. E. Cribbe, Regulatory Engineer	AREA CODE 7 1 7 4 5 6 - 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)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

At 0902 am, on September 26, 1989, with Unit 3 in Cold Shutdown, a Group IIA Primary Containment Isolation actuated, resulting in automatic closure of the Reactor Water Cleanup (RWCU) System (inboard) isolation valve and tripping of the "3B" RWCU pump.

The root cause of the event was improper action resulting from a personnel error. A non-licensed utility maintenance planner opened a RWCU Low Pressure side Instrument Drain Valve. Opening the Instrument Drain Valve simulated a high flow condition in the RWCU suction piping and the isolation occurred as designed. At 0932 am the isolation logic was reset and the RWCU System was returned to service.

No safety consequences occurred as a result of this event. Had this event occurred at power, the temporary isolation of the RWCU System would have no significant impact on continued power operations or reactor water chemistry.

The individual involved in the event was counselled. This event and its consequences were discussed with appropriate Maintenance, Instrument and Control, and Plant Supervisory personnel. There were no previous similar events.

Requirements for the Report

This report is required per 10 CFR 50.73(a)(2)(iv) because an event occurred which resulted in an automatic actuation of an Engineered Safety Feature (ESF).

Unit Status at Time of the Event

Unit 3 was shutdown with the Reactor Mode Switch (EIIS:HS) in the shutdown position.

"3B" Reactor Water Cleanup (RWCU) (EIIS:CE) pump (EIIS:P) was operating.

The RWCU pump Differential Pressure Indicator (DPI) (EIIS:DPI) was indicating down scale with the RWCU System in operation.

Description of the Event

On September 26, 1989 at 9:02 am a Group IIA Inboard Primary Containment Isolation (PCI) (EIIS:JM) occurred as a result of opening the Low Pressure side Instrument Drain Valve (LPIDV) (EIIS:V) of the RWCU Differential Pressure Indicator Switch (DPIS) (EIIS:PDIS). A Group IIA inboard PCI results in tripping the RWCU pumps and isolating the RWCU System by closing the inboard RWCU suction valve (MO-3-12-15) (EIIS:V).

The RWCU DPI was indicating down scale with the RWCU System in operation. It was thought that the sensing line may be clogged. In an attempt to determine if blockage existed in the instrument lines a non-licensed utility maintenance planner individually opened the High Pressure side Instrument Drain Valve (HPIDV) and LPIDV to the RWCU DPIS. Drain flow was noticed from each side of the DPIS. Opening the LPIDV simulated a high flow condition in the RWCU suction piping (EIIS:FSP) and a Group IIA inboard PCI occurred as designed. Control Room Annunciators alerted the Control Room Operators of the Group IIA inboard PCI. Subsequent investigation determined the cause of the isolation. At 0932 am the isolation logic (EIIS:JF) was reset and the RWCU System was returned to service.

Cause of the Event

The proximate cause of this event was failure to follow Plant approved work control procedures. The root cause of this event was an inappropriate action based on an incorrect perception that formal troubleshooting controls did not have to be followed. This incorrect perception was based on the following conditions: a) the RWCU DPI read down scale, and b) the HPIDV and LPIDV had tygon tubing connected to them leading to the floor drain (EIIS:DRN). Based on the long term shutdown of Unit 3, with most systems having been out of service and the Instrument Drain Valves (IDV) having tygon tubing set up for the function the maintenance planner wanted to perform, he opened the valves to check for blockage in the instrument lines.

One additional error was made which may have prevented this event. The maintenance planner failed to communicate with Control Room personnel, as required by plant procedures, his prospective actions prior to opening a valve. During the post incident investigation, the individual stated he realized he was not permitted to manipulate valves or controls.

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

Analysis of the Event

No safety consequences occurred as a result of this event.

The equipment properly responded to this event. The isolation of the dump flow path and the resultant increase of Reactor Pressure Vessel (RPV) (EIIS:RPV) water level increased the margin of safety with respect to adequate covering of the core (EIIS:AC). The regulation of reactor temperature utilizing the Residual Heat Removal (EIIS:BO) and Reactor Recirculation System (EIIS:AD) was unaffected by the isolation of the RWCU System.

If this event occurred during power operations, there would be no actual or adverse consequences whether the RWCU System was aligned for normal operation or discharge to radwaste (EIIS:WD). During normal operation, the RWCU System removes water from the RPV for purification and returns water to the vessel via the feedwater (EIIS:SJ) inlet resulting in no net inventory change. During the discharge to radwaste mode of operation, up to approximately 7.0E4 lbs/hr of water may be withdrawn from the RPV. If the isolation had occurred under these circumstances, the change in RPV mass outflow would be insignificant, and is well within the capability of the feedwater control system to maintain RPV water level.

During this event, the purification function of the RWCU System was unavailable for 30 minutes. The RWCU System could have been quickly returned to service, had this event occurred during power operation, and the effect on primary coolant chemistry would have been minimal.

Corrective Actions

The Group IIA inboard PCI was reset, and the "3B" RWCU pump was returned to service.

The individual involved in the incident was counselled.

This event and its consequences were discussed with appropriate Maintenance, Instrument and Control, and Plant Supervisory personnel. The purpose of these discussions were to insure appropriate troubleshooting procedures are used, and stress the importance of realizing actions in the plant may have significant consequences including jeopardizing personnel safety and challenging plant safety systems.

Previous Similar Events

There were no previous LERs identified that resulted in an inboard Group IIA PCI as a result of failing to follow procedures.