CCN 92-14117

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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KEN POWERS
PLANT MANAGER

October 13, 1992

Docket No. 50-277

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

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

This LER concerns a Missed Average Power Range Monitor surveillance due to less than adequate implementation of change in performing Soft Shutdowns.

Reference:	Docket No. 50-277
Report Number:	2-92-017
Revision Number:	00
Event Date:	09/12/92
Report Date:	10/13/92
Facility:	Peach Bottom Atomic Power Station RD1, Box 208, Delta, PA 17314

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

Sincerely,

Ken Powers

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

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NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
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)	DOCKET NUMBER (2)	PAGE (3)
Peach Bottom Atomic Power Station - Unit 2	0 5 0 0 0 2 7 7	1 OF 0 4

TITLE (4) Missed Average Power Range Monitor Surveillance due to Less Than Adequate Implementation of Change in Performing Soft Shutdowns

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 5 0 0 0
0 9	1 2	9 2	9 2	–	0 1 7	– 0 0	1 0	1 3	9 2		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 0 5		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)	X 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
	AREA CODE
Albert A. Pulvio, Regulatory Supervisor	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)

On 9/12/92 at 0315 hours during a controlled shutdown of Unit 2, the Reactor Mode switch (EIIS:HS) was placed in the "STARTUP" position prior to completing the calibration of the APRM startup mode high flux SCRAM setpoint. This is a violation of Technical Specification 4.1.A which requires the APRM startup mode high flux SCRAM setpoint to be within surveillance when the mode switch is in the "STARTUP" position. The Outage Shift Supervisor made the decision to move the reactor mode switch to the "STARTUP" mode without having the calibration of the APRM startup mode high flux SCRAM setpoint performed. The practice of performing controlled "Soft" shutdowns, where the reactor power is manually reduced to zero percent by control rod insertion, began approximately 18 months ago. Investigation into the cause of this event and critiques of previous "Soft" shutdowns has revealed that the implementation of the change to this type of shutdown was less than adequate. There were no actual safety consequences as a result of this event. The APRM startup high flux SCRAM setpoint calibration was completed satisfactory at approximately 1100 hours on 9/12/92. All setpoints were found to be within acceptable limits. "Soft" shutdowns will be evaluated as a Plant Evolution/Special Test in the future to ensure adequate controls are put in place to properly control this evolution. This will be done until permanent programmatic changes are made to ensure "Soft" shutdown activities are performed as required.

Requirements for Report

This report is being submitted pursuant to 10 CFR 50.73 (a)(2)(i)(B) due to an Average Power Range Monitor (APRM) Surveillance Test not being performed as required by Technical Specification (Tech Spec) 4.1.A.

Unit Conditions at Time of the Event

Unit 2 was in the "STARTUP" mode at approximately 5 percent power. A controlled reactor shutdown was in progress. There were no systems, structures, or components that were inoperable that contributed to this event.

Description of the Event

On 9/12/92 at 0315 hours during a controlled shutdown of Unit 2, the Reactor Mode switch was placed in the "STARTUP" position prior to completing the calibration of the APRM (EIIS:IG) startup mode high flux SCRAM setpoint. This is a violation of Tech Spec 4.1.A which requires the APRM startup mode high flux SCRAM setpoint to be within surveillance when the mode switch is in the "STARTUP" position.

The Outage Shift Supervisor (Utility, Licensed) made the decision to move the reactor mode switch to the "STARTUP" position without having the calibration of the APRM startup mode high flux SCRAM setpoint performed. Prior to moving the mode switch to "STARTUP", the reactor was at approximately 5 percent power and the Supervisor was carefully monitoring the transition from automatic to manual control of the feedwater system. Additionally, the Supervisor was mis-informed by an Instruments and Controls Technician (Utility, Non-licensed) that the calibration could not be performed with the mode switch in the "RUN" position. Based on the above, the Outage Shift supervisor directed that the mode switch be placed in the "STARTUP" position at 0315 hours. The Supervisor then directed that the APRM startup mode high flux SCRAM setpoint calibration be performed.

During the calibration, expected Reactor Protection System half SCRAM signals and other alarms were received which caused concern over receiving a full SCRAM signal while continuing to reduce reactor power. Referring to a note in General Plant (GP) procedure 3, "Normal Plant Shutdown", which cautions against activities which could distract from monitoring reactivity, the Supervisor directed that the calibration be halted until the shutdown was complete. The reactor shutdown was completed at approximately 0800 hours and the calibration of the APRM startup mode high flux SCRAM setpoint was completed at approximately 1100 hours.

Cause of the Event

The practice of performing controlled "Soft" shutdowns, where the reactor power is manually reduced to zero percent by control rod insertion, began approximately 18 months ago. Since that time only three complete "Soft" shutdowns have been performed. Investigation into the cause of this event and critiques of previous "Soft" shutdowns has revealed that the implementation of the change to this type of shutdown was less than adequate. In the past, "Soft" shutdowns have been treated as normal plant evolutions. However, "Soft" shutdowns are complex evolutions which, per administrative procedure A-1.2 "Special Tests and Plant Evolutions", should be evaluated as a Plant Evolution/Special Test. This procedure ensures that appropriate pre-evolution planning, training, and briefings are performed as required. Had this shutdown been performed as a Plant Evolution/Special Test, the evolution would have been better controlled.

Additionally, past corrective actions to improve GP-3 and the APRM calibration procedures were determined to be less than adequate. GP-3 directed the APRM calibration to be performed just prior to going to the "STARTUP" mode during which time additional monitoring of reactor power and level is required. However, the APRM calibration procedures could be performed at any power level. Also, the APRM calibration procedures were not clear concerning the plant mode in which they should be performed.

Analysis of the Event

There were no actual safety consequences as a result of this event. The APRM startup high flux SCRAM setpoint calibration was completed satisfactorily at approximately 1100 hours on 9/12/92. All setpoints were found to be within acceptable limits. Therefore, had a high flux condition occurred when the mode switch was in the "STARTUP" position, a reactor SCRAM would have occurred as designed. Additionally, the Intermediate Range Power Monitor high flux SCRAM setpoint was operable and would have provided a reactor SCRAM signal had the APRM SCRAM setpoint failed to actuate.

Corrective Actions

"Soft" shutdowns will be evaluated as a Plant Evolution/Special Test in the future to ensure adequate controls are put in place to properly control this evolution. This will be done until permanent programmatic changes are made to ensure "Soft" shutdown activities are performed as required.

The need to follow procedures and Tech Specs was re-emphasized to the Supervisor involved.

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

Operations management will distribute information from this event to the appropriate operations personnel emphasizing the need to request assistance when faced with conflicting information or the need to perform more than one complex task at the same time.

GP-3 was revised to direct performance of the APRM startup mode high flux SCRAM setpoint calibration during pre-shutdown preparations. Additionally, the surveillance instructions for the calibration of the APRM startup mode high flux SCRAM setpoint are being revised to clarify the plant modes in which these calibrations should be performed.

A team of Operations, Technical and Maintenance/I&C personnel will review nuclear instrument surveillance instructions to clarify when these tests should be performed during reactor shutdowns and startups as required by Tech Specs, to review the scope of each procedure to eliminate duplication where appropriate, and to ensure appropriate placement of the step directing performance in general plant procedures.

Previous Similar Events

There were five previous similar events identified where a surveillance was not performed when the plant changed modes. These events were reported as LER's 3-89-10, 3-89-11, 2-90-09, 2-91-16, and 2-91-24. Corrective actions for these events involved corrections for each specific event and an overall review of Tech Specs for event based testing to ensure that procedural controls triggered the test performance as required. For this event, procedural controls were in place and had the existing procedures been followed, this event would not have occurred. Because "Soft" shutdown procedural changes were less than adequate, the step to perform the APRM calibration was not in the best place from a human factor viewpoint.