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

Docket Nos. 50-278
SUBJECT: Licensee Event Report, Peach Bottom Atomic Power Station Unit 2

This LER reports the failure to meet the Technical Specification surveillance requirements of the absolute difference in APRM channels and calculated power of less than or equal to 2 percent. At the time of discovery, the absolute difference was 6 percent. This LER is being submitted pursuant to requirements of 10 CFR 50.73(a)(2)(i)(B).

Reference:	Docket No. 50-277
Report Number:	2-98-007
Revision Number:	00
Event Date:	11/07/98
Report Date:	12/04/98
Facility:	Peach Bottom Atomic Power Station Unit 2 1848 Lay Road, Delta, PA 17314

Sincerely,

Mark E Warner

FCS/fcs

enclosure

cc: N.J. Sproul, Public Service Electric & Gas
R. R. Janati, Commonwealth of Pennsylvania
INPO Records Center
H. J. Miller, US NRC, Administrator, Region I
R. I. McLean, State of Maryland
A.C. McMurtray, US NRC, Senior Resident Inspector
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CCN 98-14090

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION
(6-1998)

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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TITLE (4)
Failure to Meet Technical Specification and Associated LCO Requirements of the Absolute Difference in APRM and Calculated Power of Less Than or Equal to 2 Percent.

EVENT DATE (5) MONTH	DAY	YEAR	LER NUMBER (6) YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	REPORT DATE (7) MONTH	DAY	YEAR
11	07	98	98	007	00	12	04	98

OTHER FACILITIES INVOLVED (8) FACILITY NAME	DOCKET NUMBER
	05000
	05000

OPERATING	1
POWER LOWER (10)	92.5

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 336A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Marlene Taylor	(717) 456-3479

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On November 7, 1998, Unit 2 was increased to full reactor power following Refueling Outage 2R12. The shift crew questioned why Unit 2 electrical output was only 1069 MW since Unit 3 electrical output was 1144 MW at full reactor power. Subsequent investigation by the reactor engineer found three substitute values in the plant monitoring system computer for feedwater flow temperature correction factors. These substitute values caused reactor power to be calculated incorrectly. The substitute values were removed per procedure RT-O-59C-550-2, "Adding/Deleting Substitute Values for Heat Balance Computer Points", and indicated reactor power decreased from 98.5 to 92.5 percent (during the investigation, power decreased from full reactor power to 98.5 percent due to xenon).

The Technical Specifications surveillance requires that the absolute difference between APRM channels and calculated power be less than or equal to 2 percent when operating greater than 25 percent power. Since reactor power was indicating 6 percent high this surveillance and the associated LCO was not met. The APRMs were re-calibrated per procedure ST-O-60A-210-2 "APRM System Calibration During Two Loop Operation" and core thermal power and electrical output matched as expected.

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

Requirements of the Report

This report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) due to the 6 percent absolute difference in APRM channels and calculated power not meeting the Technical Specification surveillance and the associated LCO requirements of less than or equal to 2 percent when operating greater than 25 percent power.

Unit Conditions at Time of Events

Unit 2 was in Mode 1 (RUN) operating at 92.5 percent reactor core thermal power (EIIS:RCT).

There were no other systems, structures, or components inoperable that contributed to the event.

Description of the Event

During the recent refueling outage, while performing procedure SI2F-6-50-ACC2 "Calibration Check of Reactor Feed Flow Transmitters FT 2-6-50A, B, C"; the Instrument and Control (I&C) technician encountered a problem calibrating three computer points. The computer points are associated with the feedwater flow temperature compensation in the heat balance calculation. The computer points were invalid because feedwater temperature was less than 130 degrees F. The Nuclear Information Systems Department (NISD) engineer working with the I&C technicians inserted substitute values for the three computer points confirming that substituting the values would allow the test to continue.

These activities occurred during a shift change and the substituted values were not documented. The test was resumed and completed successfully. However, the three substitute values inserted for the preliminary test were not removed.

The substituted values went undetected until November 7, 1998, when operators completed the power ascension to full power following Refueling Outage 2R12. The electrical output was 1069 megawatts (MW) at full reactor power. The shift crew questioned the Unit 2 electrical output and initiated an investigation of plant parameters to identify the cause of the suspected megawatt shortfall. The reactor engineer found three substitute values inserted in the plant monitoring system computer. The three substitute values were removed per procedure RT-O-59C-550-2 and indicated core thermal power decreased from 98.5 to 92.5 percent.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

Cause of the Event

The cause of the event is that substitute values were inserted without utilizing one of the control processes for the substitution. Utilization of one of the control processes would have provided a tracking mechanism to ensure the substitute values were removed.

Analysis of the Event

There were no actual safety consequences to the plant. The substitute values for the feedwater temperature correction factors affected the heat balance equation which calculated a higher than actual reactor power. Therefore, actual reactor power was 6 percent lower than indicated which is conservative from a plant safety perspective. The deviation is well within design basis assumptions which account for thermal power excursions up to 102 percent. Had a design basis event occurred during the time that actual reactor power was 6 percent less than indicated, there would be no impact on the ability to mitigate the event.

Corrective Actions

Completed corrective actions include the following:

The substitute values were removed per procedure RT-O-59C-550-2. Indicated reactor power decreased from 98.5 to 92.5 percent.

The Unit 3 Plant Monitoring System computer was verified to have no unexpected substitute values being utilized for heat balance calculations.

The expectations that all computer substitute values must be inserted using one of the control processes was reinforced with all personnel who can insert substitute values.

Future corrective actions include the following:

Procedure SI2F-6-50-ACC2 and SI3F-6-50-ACC2 will be revised to control substitute values that are needed during performance of the procedure.

Procedure GP-2. "Normal Plant Startup" will be revised to provide guidance to monitor plant parameters to ensure indicated reactor power and actual power are consistent during power ascension.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

Previous Similar Events

There have been no previous similar events involving substitute values not being removed in the plant monitoring system computer program.