



PECO ENERGY

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Document Control Desk
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 Technical Specification violation when the Unit 3 shift average licensed power level was slightly exceeded.

Reference: Docket No. 50-278
Report Number: 3-95-006
Revision Number: 00
Event Date: 10/25/95
Report Date: 11/27/95
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)(i)(B).

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

CCN#95-14103

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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 04
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TITLE (4)
Technical Specification Violation Due to Exceeding Licensed Reactor Power Due To Calculation Software Problem

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)
10	25	95	95	006	001	11	27	95			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) 11010	20.402(b)		20.405(c)		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)	N	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)(ix)						

LICENSEE CONTACT FOR THIS LER (12)									
NAME						TELEPHONE NUMBER			
						AREA CODE			

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO						

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

On 10/25/95, at 1600 hours, it was determined by Nuclear Information Services Division personnel (Utility:Non-licensed) that unit 3 was operated in excess of the Tech Spec 8 hour shift average core thermal power (CTP) limit of 3458 MWt by 0.011% (i.e. 3458.37 MWt) for the time period ending at 1400 hours on 10/25/95. The cause of the event has been determined to be an error in the program that calculates the Tech Spec 8 hour shift average CTP. No actual safety consequences occurred as a result of this event. The program that calculates the Tech Spec 8 hour shift average CTP was corrected. Information will be issued to licensed operations personnel ensuring that they are cognizant of the significance of the various indications involving reactor power. An evaluation of previous Tech Spec shift 8 hour average CTP readings on both units 2 and 3 was performed and no other violations were identified. No previous similar events were identified.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 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	LER NUMBER (5)			PAGE (3)	
		YEAR 9 5	SEQUENTIAL NUMBER 0 0 6	REVISION NUMBER 0 0	OF	0 4

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

Requirements of the Report

This report is submitted pursuant to 10 CFR 50.73 (a)(2)(i)(B) as a result of a Technical Specification (Tech Spec) violation when the shift average licensed power level was slightly exceeded.

Unit Conditions at Time of Discovery

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

Description of the Event

On 10/25/95, at 1600 hours, it was determined by Nuclear Information Services Division personnel (Utility:Non-licensed) that unit 3 was operated in excess of the Tech Spec 8 hour shift average core thermal power (CTP) limit of 3458 MWt by 0.011% (i.e. 3458.37 MWt) for the time period ending at 1400 hours on 10/25/95. At 1254 hours, prior to identification of this event, an alarm in the control room indicated that the average CTP for the previous 8 hours was 3458.03. At this time, the reactor operator (Licensed:Utility) verified that the Tech Spec average CTP for the current 8 hour shift was lower than the rolling 8 hour CTP reading. Based on this, no additional actions were deemed necessary until the condition described below was identified at 1600 hours.

Cause of the Event

The cause of the event has been determined to be an error in the program that calculates the Tech Spec 8 hour shift average CTP. Had the program been correct, an appropriate alarm would have been received prior to causing a Tech Spec violation. The exact cause for the computer programming error is still under investigation, however, the following contributing factors are known:

1. The feedwater flow value used to calculate the current CTP was experiencing periodic fluxuations. The program that calculates current CTP is designed to disregard these spikes to prevent erroneous CTP calculations. When this situation occurs, this program indicates zero percent power and initiates a flag to identify the reading as invalid.
2. The program that averages the CTP for the Tech Spec 8 hour shift limit was designed to disregard readings flagged as invalid for the current CTP. However,

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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 6	— 0 0	0 3	OF 0 4

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

it has been determined that this program was not receiving the invalid signal flag and therefore was using the zero percent power readings in its calculations. This resulted in a lower than actual average CTP for the shift.

- The program that determines the rolling 8 hour average CTP was properly disregarding the zero percent CTP readings and was providing accurate data.

The reason the potential for exceeding the Tech Spec shift 8 hour average CTP was not identified sooner was that the reactor operator was misled by the lower than actual Tech Spec 8 hour shift average CTP reading.

Analysis of the Event

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

Plant accident and transient analyses account for power excursions above 100% power. Therefore, there was no impact on the ability of the plant to respond had a design basis event occurred. Additionally, no other plant reliability or functional concerns were created with this temporary power excursion.

Corrective Actions

The program that calculates the Tech Spec 8 hour shift average CTP was corrected to disregard zero percent power readings as well as those flagged as invalid. Further investigation into why the program was incorrect is being conducted. Additional corrections will be implemented as necessary.

Information will be issued to licensed operations personnel ensuring that they are cognizant of the significance of the various indications involving reactor power.

An evaluation of previous Tech Spec shift 8 hour average CTP readings on both units 2 and 3 was performed and no other violations were 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-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	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 5	- 0 0 6	- 0 0	0 4	OF 0 4

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

Previous Similar Events

No previous similar events were identified in which the Tech Spec 8 hour shift average CTP was exceeded due to a problem with the averaging program. However, LER 2-92-014 involved a Tech Spec violation when steady state power was exceeded due to uncertainties involving the measurement of feedwater flow. These uncertainties were in the unconservative direction and resulted in a slightly higher than allowable level of thermal power. Corrective actions involved adjusting the feedwater flow input into the process computer. Since the current event involves the introduction of 'zero' CTP readings in the averaging program for determining the Tech Spec 8 hour shift CTP, corrective actions from LER 2-92-014 could not have been expected to prevent this event.