



PECO ENERGY

PECO Energy Company
 RD 1, Box 208
 Delta, PA 17314-9739
 717 456 7014

July 7, 1994

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

Docket Nos. 50-277 & 50-278

SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Units 2 and 3

This LER concerns a Technical Specification violation when the Circulating Water Composite Sampling systems were not properly functioning. This revision provides updated information regarding this event.

Reference: Docket Nos. 50-277 & 50-278
 Report Number: 2-94-002
 Revision Number: 01
 Discovery Date: 04/21/94
 Reportability Date: 04/26/94
 Report Date: 07/07/94
 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,

Garrett D. Edwards
 Plant Manager

GDE/GAJ:gaj
 enclosure

cc: R.A.Burricelli, Public Service Electric & Gas
 W. P. Dornsife, 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, Resident Inspector
 C. D. Schaefer, DelMarVa Power
 H. C. Schwemm, VP - Atlantic Electric

120009

CCN 94-14118

9407130130 940707
 PDR ADDCK 05000277
 S PDR

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 (P530), 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 Units 2 & 3										DOCKET NUMBER (2) 0 5 0 0 0 2 7 7 1										PAGE (3) 1 OF 0 4	
TITLE (4) Failure to have the circulating water composite sampling systems operable																					
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 4	2 1	9 4	9 4	0 0 2	0 1	0 7	0 7	9 4	Peach Bottom Unit 3						0 5 0 0 0 2 7 8						
															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)						
1 0 0			20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vi)				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											
Anthony J. Wasong, Manager - Experience Assessment										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 NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)				MONTH	DAY	YEAR					
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO											

On 4/26/94, a review by Chemistry Personnel confirmed that the Circulating Water Composite Sampler systems were not operated in a manner to obtain representative composite samples of the Circulating Water intake and discharge. The cause of the event has been determined to be that the sample lines on the systems became plugged due to the build up of silt from the river water. This condition caused a decrease in the sample flow rate over time. Therefore, representative composite samples were not obtained every two hours and this resulted in a Technical Specification (Tech Spec) violation. In addition, the Chemistry Technicians, on a regular basis, adjusted the sample flow rates in an attempt to compensate for silt blockage. If the sample flow rate was found low and the sample tank was not completely filled, the flow rate was increased to fill the sample tank. This overcompensation resulted in the dilution of the composite sample. The permanent systems were declared inoperable and daily grab samples were initiated. Portable composite sampling systems have been installed on the Circulating Water Intake and Discharge in lieu of the permanent systems. In addition, the procedures used to operate the new portable systems includes guidance to the Technicians to address low sample flow conditions. The information from this event will be provided to the appropriate members of the Station staff. 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-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 Units 2 & 3	DOCKET NUMBER (2) 0 5 0 0 0 2 7 7 9 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
			— 0 0 2 —	0 1	0 2	OF	0 4

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

Requirements for the Report

This report is being submitted pursuant to 10 CFR 50.73 (a)(2)(i) as a result of a violation of Technical Specification (Tech Spec) 4.8.E.1 and Table 4.8.3.a since Circulating Water Composite Samples were not properly obtained.

Unit Conditions at Time of Event

Units 2 and 3 were in the RUN mode of operation at various thermal reactor (EIS:EA) power levels. There were no systems, structures, or components that were inoperable that contributed to the event.

Description of the Event

Tech Spec 4.8.E.1 and Table 4.8.3.a require that Circulating Water Composite Samples be obtained every two hours and analyzed monthly. This requirement is fulfilled by the Composite Sampling systems which continuously obtain water samples and place them in holding tanks. At the end of the collection period, each tank is mixed and a representative sample is obtained and analyzed to determine the radiological conditions of the water entering and leaving the station. On 4/26/94, a review by Chemistry Personnel confirmed that the Circulating Water Composite Sampler systems were not operated in a manner to obtain representative composite samples. Recent operating data indicated that the Composite Sampling systems periodically produced low sample flow due to silt build up in the sample lines. To compensate for periods of reduced sample flow, the Chemistry Technicians routinely increased the sample flow rate to ensure that the holding tanks would be filled with water by the end of the collection period. These excessive variations in the sample flow rates did not meet the intent of the Tech Specs. This condition was initially identified by the NRC.

Cause of the Event

The cause of the event has been determined to be that the sample lines on the Circulating Water Intake and Discharge Composite Samplers became plugged due to the build up of silt from the river water. This condition caused a decrease in the sample flow rate over time. Eventually, as the lines became blocked by silt, the sample flow rates would decrease to a marginal flow rate. This buildup of silt in the Discharge Composite Sampler was not as pronounced as that in the Intake Composite Sampler, but the flow rate of both samplers were reduced. Therefore, representative composite samples were not obtained every two hours and this resulted in a Tech Spec violation. The original design of the systems did not adequately address the build up of silt. In addition, the

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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)

LER NUMBER (6)

PAGE (3)

Peach Bottom Atomic Power Station
Units 2 & 3

0 | 5 | 0 | 0 | 0 | 2 | 7 | 7 | 9 | 4 | — | 0 | 0 | 2 | — | 0 | 1 | 0 | 3 | OF | 0 | 4

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

Chemistry Technicians, on a regular basis, adjusted the sample flow rates in an attempt to compensate for silt blockage. If the sample flow rate was found low and the sample tank was not completely filled, the flow rate was increased to fill the sample tank. This overcompensation resulted in the dilution of the composite sample. This occurred at the Intake and Discharge systems. It was not recognized by the individuals involved that excessive variations in the sample flow rate between samples could impact the validity of the composite sample. The procedure used to operate the Composite Sample Systems did not provide adequate direction to the Technicians for low flow conditions.

Analysis of Event

The consequences are considered minimal. The Circulating Water Composite Sampling systems are intended to assess the radiological conditions of the river water entering and exiting the plant. Based on a review of operating data and process release data during the period of non compliance, no elevated radiological conditions could have occurred in the Circulating Water Intake. The process radiation monitors were functional and no uncontrolled releases occurred. Had an uncontrolled release occurred, other offsite systems were available to access the consequences of the release.

Corrective Actions

The Circulating Water Composite Sample lines were flushed and the systems were returned to service. The system flow rates were increased which should have made the systems less susceptible to silt build up, however, this attempt proved unsuccessful since both Composite Samplers could not sustain a consistent sample flow rate. Therefore, the permanent systems were declared inoperable and daily grab samples in accordance with Tech Specs were initiated.

Portable composite sampling systems have been installed on the Circulating Water Intake and Discharge in lieu of the permanent systems. A similar portable system will be installed on the Circulating Water Discharge. In addition, the procedures used to operate the new portable systems includes guidance to the Technicians to address low sample flow conditions.

The pertinent information from this event has been provided to the appropriate members of the Chemistry Staff. In addition, information from this event will also be provided to the appropriate members of the Station staff to emphasize the importance of alerting supervision and management to similar conditions requiring increased attention to compensate for inadequate system design or performance.

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)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

Peach Bottom Atomic Power Station
Units 2 & 3

0	5	0	0	0	2	7	7	9	4	—	0	0	2	—	0	1	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 have been identified which involved problems with diluting the samples. However, one previous event occurred (LER 2-92-08) which involved the failure to return composite sampling pumps to service. The cause of this event was that the daily manual grab sample method was considered an acceptable alternate sampling method. Therefore, a low priority was assigned to the maintenance action requests for Composite Sampler repairs. As a result, the samplers were out of service for extended periods of time. The corrective actions associated with this event were to repair and return the samplers to service. In addition, actions were also taken to ensure that Work Orders associated with Environmental Tech Spec sampling equipment received a sufficient priority. Since the causes associated with the previous event were different than this event, it is not expected that the corrective actions would have prevented this event.