

Exelon Nuclear
Peach Bottom Atomic Power Station
1848 Lay Road
Delta, PA 17314-9032

Telephone 717.456.7014
www.exeloncorp.com

10CFR 50.73

April 16, 2004

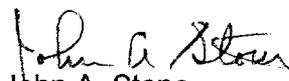
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Peach Bottom Atomic Power Station (PBAPS) Unit 2
Facility Operating License Nos. DPR-44
NRC Docket No. 50-277

Subject: Licensee Event Report (LER) 2-04-01

This LER reports a manual scram of Unit 2 and resultant Primary Containment Group II and III isolations. In accordance with NEI 99-04, the regulatory commitment contained in this correspondence is to restore compliance with the regulations. The specific methods that are planned to restore and maintain compliance are discussed in the LER. If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,


John A. Stone
Plant Manager
Peach Bottom Atomic Power Station

JAS/ajs/CR 203355

Attachment

cc: PSE&G, Financial Controls and Co-owner Affairs
R. R. Janati, Commonwealth of Pennsylvania
INPO Records Center
H. J. Miller, US NRC, Administrator, Region I
R. I. McLean, State of Maryland
C. W. Smith, US NRC, Senior Resident Inspector

CCN 04-14040

IE22

SUMMARY OF EXELON NUCLEAR COMMITMENTS

The following table identifies commitments made in this document by Exelon Nuclear. (Any other actions discussed in the submittal represent intended or planned actions by Exelon Nuclear. They are described to the NRC for the NRC's information and are not regulatory commitments.)

Commitment	Committed Date or "Outage"
In accordance with NEI 99-04, the regulatory commitment contained in this correspondence is to restore compliance with the regulations. The specific methods that are planned to restore and maintain compliance are discussed in the LER.	In accordance with the Corrective Action Program

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME Peach Bottom Atomic Power Station, Unit 2	2. DOCKET NUMBER 05000 277	3. PAGE 1 OF 3
--	--------------------------------------	--------------------------

4. TITLE
Manual Scram Resulting from Low Condenser Vacuum due to a Failed Feedwater Turbine Expansion Joint

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
2	22	04	04	001	00	04	16	04		05000
										05000

9. OPERATING MODE 1	11 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check all that apply)									
	20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)						
10. POWER LEVEL 043	20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)						
	20.2203(a)(1)	50.36(c)(1)(i)(A)	X 50.73(a)(2)(iv)(A)	73.71(a)(4)						
[REDACTED]	20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)						
	20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER						
	20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A						
	20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)							
	20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)							
	20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)							
	20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)							

12. LICENSEE CONTACT FOR THIS LER

NAME James L. Mallon	TELEPHONE NUMBER (Include Area Code) (717) 456-3351
--------------------------------	---

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	SK	EXJ	T330	Y					

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO		MONTH	DAY	YEAR

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

Peach Bottom Unit 2 was manually scrambled at approximately 1510 hours on 2/22/04 as a result of decreasing Main Condenser vacuum. Prior to the event, at 1424 hours, an increase in the air in-leakage into the condenser occurred. This prompted entry into the Operational Transient (OT) procedure for low condenser vacuum. Condenser vacuum was 27.1" Hg at the time the OT procedure was entered. A power reduction was performed to approximately 43% power with a resultant condenser vacuum of approximately 25.5" Hg. A briefing was conducted and the reactor was manually scrambled in accordance with the OT procedural direction since Condenser vacuum was not restored to above the procedurally required 26.2" Hg value for the current plant condition. As a result of the manual scram, reactor water level decreased, as expected, to below the reactor water level-three (lo-level) set point resulting in Primary Containment Isolation System Group II and III isolations. The cause of the event was due to a leaking Reactor Feedpump Turbine Exhaust expansion joint. The expansion joint was repaired. There were no safety consequences as a result of this event.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Peach Bottom Atomic Power Station, Unit 2	05000277	04	- 001	- 00	2 OF 3

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

Unit Conditions Prior to the Event

Unit 2 was in Mode 1 and operating at approximately 43% power. As a result of an increase in the air in-leakage into the condenser, entry into the Operational Transient (OT) procedure for low condenser vacuum had been performed. This entry resulted in reactor power being reduced to 43%. At the time of the event, leak testing to determine potential sources of the air in-leakage was in progress. The leak testing activities did not contribute to the scram event. There were no structures, systems or components out of service that contributed to this event.

Description of the Event

Unit 2 was manually scrammed at approximately 1510 hours on 2/22/04 as a result of decreasing Main Condenser vacuum. The Operational Transient procedure (OT-106) for low Condenser vacuum had been entered at 1424 hours due to a large increase in the air in-leakage into the condenser. Main Condenser vacuum was 27.1" Hg at the time OT-106 was entered. A power reduction had been performed to approximately 43% power with a resultant Condenser vacuum of approximately 25.5" Hg. A briefing was conducted and the reactor was manually scrammed in accordance with the OT procedural direction since Condenser vacuum was not restored to above the procedurally required 26.2" Hg value (i.e. the vacuum necessary to protect the low pressure turbine last stage buckets when operating at low turbine-generator load). The automatic scram set point for low Condenser (EIS: COND) vacuum is 23.0" Hg. As a result of the manual scram, reactor water level decreased, as expected, to the reactor water level three set point resulting in Primary Containment Isolation System (PCIS) (EIS: JM) Group II and III isolations.

Residual heat in the reactor was removed via the normal heat sink (i.e. Condenser) using bypass valves. Condenser capability for heat removal was maintained throughout the event.

The 'C' Reactor Feed Pump discharge control valve (EIS: FCV) exhibited sluggish behavior at approximately 1525 hours. This resulted in slightly exceeding the specified reactor water level control band (i.e. level reached +32" versus a band of +10" to +30"). This condition was promptly detected and resolved by operations personnel. No high water level set points were reached. This level control instrumentation is not safety related.

Appropriate regulatory notifications were completed by 1842 hours on 2/22/04 to report the scram and resultant PCIS isolations.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Peach Bottom Atomic Power Station, Unit 2	05000277	04	001	00	3 OF 3

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

Analysis of the Event

There were no actual safety consequences as a result of this event. All control rods inserted on the reactor scram signal. Group II and Group III PCIS isolations initiated as expected when reactor water level decreased to the level-three (lo-level) reactor water level set point.

Subsequent analysis has determined that the size of the leak in the Reactor Feed pump turbine exhaust expansion joint bellows (EJIS: XJ) was within the capacity of the steam jet air exhausters and therefore, the automatic low Condenser vacuum set point would not have been reached. Therefore, there was no concern that the normal heat sink for the plant could have been lost. Normal heat removal systems were used for plant shutdown.

The event was determined to not be risk significant.

Cause of the Event

The cause of the event was due to a breach in the 2A Reactor Feed Pump Turbine Exhaust Expansion Joint bellows (46"x46", Model 83-1983-C, manufactured by Tube Turns). Subsequent to the unit shutdown, inspections were performed for the source of the Condenser vacuum reduction. The inspection revealed that a small opening had developed in the expansion joint.

Corrective Actions

Temporary repairs were made to the 2A Reactor Feed Pump Turbine Exhaust expansion joint, XJ-2170A. Post repair testing was performed with satisfactory results. The expansion joints for the other Reactor Feed Pump Turbines were tested for leakage and no additional problems were noted. Other pressure boundary components that could contribute to condenser in-leakage were examined and/or tested for leakage. Additional analysis of the expansion joint is being performed. Additional underlying causes and corrective actions will be pursued in accordance with the Corrective Action program. Long term repairs to the expansion joint are planned for the next refueling outage.

Previous Similar Occurrences

There were no previous similar LERs identified involving a failure of a reactor feed pump turbine exhaust joint.