



PEACH BOTTOM--THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

R. D. 1, Box 208

Delta, Pennsylvania 17314

(717) 456-7014

12-13-90

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 Technical Specification Limiting Condition of Operation not entered for an inoperable containment isolation valve due to procedural deficiency.

Reference: Docket No. 50-277
Report Number: 2-90-033
Revision Number: 00
Event Date: 11/08/90
Report Date:
Facility: Peach Bottom Atomic Power Station
RD 1, Box 208, Delta, PA 17314

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

Sincerely,

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

9012130301 901293
PDR ADOCK 05000277
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bcc: R. A. Burricelli, Public Service Electric & Gas
Commitment Coordinator
Correspondence Control Program
T. M. Gerusky, Commonwealth of Pennsylvania
INPO Records Center
R. I. McLean, State of Maryland
C. A. McNeill, Jr. - S26-1, PECO President and COO
D. B. Miller, Jr. - SMO-1, Vice President - PBAPS
Nuclear Records - PBAPS
H. C. Schwemm, VP - Atlantic Electric
J. Urban, Delmarva Power

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 2 7 7	PAGE (3) 1 OF 0 3
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TITLE (4) **Tech Spec Limiting Condition of Operation was not Entered for an Inoperable Containment Isolation Valve due to Procedural Deficiency**

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)
1	1	0 8	9 0	0 3	3	0	0	0				0 5 0 0 0
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THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)

OPERATING MODE (9) N	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 9 8	20.405(a)(1)(iii)	50.38(c)(1)	50.73(a)(2)(iv)	73.71(c)
	20.405(a)(1)(iv)	50.38(c)(2)	50.73(a)(2)(v)	OTHER (Specify in Abstract below and in Text NRC Form 366A)
	20.405(a)(1)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	50.73(a)(2)(vi)(A)	
	20.405(a)(1)(vi)	50.73(a)(2)(ii)	50.73(a)(2)(vi)(B)	
	20.405(a)(1)(vii)	50.73(a)(2)(iii)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME A. A. Fulvio, Regulatory Engineer	TELEPHONE NUMBER AREA CODE 7 1 7	4 5 6 - 7 0 1 4
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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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On 11/8/90, a resident NRC inspector discovered the bottle pressure for the compressed Nitrogen (N2) gas cylinder that supplies backup gas pressure to the Air Operated (AO)-2519, "Drywell and Torus Inlet N2 Purge" valve operator and boot seal to be less than the acceptable value specified in the daily surveillance test. A review of the completed surveillance tests indicated that the leak rate appears to have increased above the allowable limit in May 1990. Tech Spec 3.7.D.2 should have been entered and the appropriate Limiting Condition for Operation taken when the leak rate first exceeded allowable limits. The cause of the event was due to procedure deficiencies. No actual safety consequences occurred as a result of this event. The boot seal for AO-2519 was inflated during the entire event by the normal instrument air system. The backup N2 supply was available for the redundant inboard containment isolation valves in this penetration during the event. The leak was repaired. The surveillance test was temporarily changed to provide clear operability criteria. Two previous similar LERs were identified.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

Requirements for the Report

This report is required per 10 CFR 50.73(a)(2)(1)(B) as a result of a condition prohibited by Tech Specs.

Unit Conditions at Time of Event

Unit 2 was in the RUN mode at 98% of rated thermal reactor power. There were no systems, structures, or components that were inoperable that contributed to this event.

Description of Event

On 11/8/90, a resident NRC inspector discovered the bottle pressure for the compressed Nitrogen (N₂) gas cylinder that supplies backup gas pressure to the Air Operated (AO)-2519 (EIS:ISV), "Drywell and Torus Inlet N₂ Purge" valve operator and boot seal to be less than the acceptable value specified in the daily surveillance test. The Shift Supervisor (Utility, Licensed) was notified and the bottle was replaced. Due to the leakage rate, the valve was declared inoperable and Tech Spec 3.7.D.2 Limiting Condition for Operation (LCO) was entered for an inoperable containment isolation valve. The LCO remained in effect until modification work on AO-2519 was complete. The leak was repaired and the LCO was exited on 11/12/90.

A review of the completed surveillance tests indicated that the leak rate appears to have increased above the allowable limit in May 1990. Tech Spec 3.7.D.2 should have been entered and the appropriate Limiting Condition for Operation taken when the leak rate first exceeded allowable limits. The daily surveillance of bottle pressures instructs the operator to install a fresh N₂ bottle and notify the System Engineer when bottle pressure drops below 1300 psig. The 1300 psig pressure criteria is based on a leak rate that ensures the the bottle could supply boot seal pressure for 20 days following design basis LOCA with a seismic event or a loss of off-site power.

Cause of Event

The cause of the event was procedure deficiencies in that clear direction is not provided to the shift in the daily surveillance test for determination of operability of the valve. The surveillance test criteria concentrated on bottle pressure and not on the actual leak rate.

A contributing cause is personnel error. The Shift is directed by the surveillance test to call the System Engineer by the following working day after a N₂ bottle is replaced. This information was not being forwarded to the System Engineers. If the System Engineers had been notified of the increased frequency of bottle replacements, the leakage problem may have been addressed.

Another contributing cause is that the importance of loss of N₂ bottle supply on AO valve operability was not clearly understood by the shift. The backup N₂ system is not described in Tech Specs. An Engineering document exists which determined that the gas bottles are required to provide a 20 day supply of N₂ to the valve boot seals in the event of a loss of the normal air supply. This document, in the form of a

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

Justification for Continued Operation (JCO) was not adequately addressed in the surveillance test nor were the shift personnel aware of it.

Analysis of Event

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

The valve operator and boot seal are supplied by the Instrument Air System (EIS:LD) under normal operation. In the event of a loss of the instrument air, N2 is supplied from a compressed gas cylinder to maintain boot seal pressure for up to 20 days. The boot seal for AO-2519 was inflated during the entire event by the normal instrument air system. AO-2519 is an outboard containment isolation valve in the containment purge penetration. The backup N2 supply was available for the inboard containment isolation valves in the containment purge penetration during this event, except for the short period detailed in LER 2-90-032.

For a Design Basis LOCA with a seismic event or a loss of off-site power, the normal instrument air supply to the AO would be lost, and the AO-2519 boot seal would be supplied by the gas cylinder to maintain containment integrity (EIS:JM). Historical data indicates that the leakage past the deflated boot seal would be within 10 CFR 50 App J and Tech Spec limits.

Corrective Actions

The leak was repaired. The surveillance test was temporarily changed to provide clear operability criteria. The Operators have been informed of the significance of N2 bottles and associated operability concerns. System Engineers will review the surveillance test data weekly in order to identify increased leakage which may result in exceeding the 20 day requirement.

Modification 1316 is scheduled to be installed during the upcoming Unit 2 Refueling Outage (1/91). This modification replaces the backup bottles with nitrogen supplied directly from the Containment Atmospheric Dilution System. If the daily N2 bottle Surveillance is still required following the modification it will be revised to include a per-day leak rate acceptance criteria and clear operability criteria.

The lack of awareness of the JCO indicates a need for program improvements. Existing JCOs will be reviewed for required procedure revisions and training issues. A tracking mechanism will be established for action items resulting from JCOs.

Previous Similar Events

Two previous similar LERs were identified. LER 2-80-030/IT-0 involved a potential loss of primary containment involving the Backup Nitrogen System. In this event the backup N2 supply valve was found closed. No corrective action was taken other than reestablishing N2 supply. Therefore, the corrective actions taken would not have prevented this event. LER 2-90-032 involved a leak in the backup N2 supply. Corrective actions involved revision of the surveillance test to better address valve operability. Since only 2 days separated this event and the one described in LER 2-90-032, the corrective actions had not yet been implemented.