

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 2 DOCKET NUMBER (2) 05000277 PAGE (3) 1 OF 03

TITLE (4) Acetylene Leak in Drywell

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 NAME	DOCKET NUMBER (9)	
06	08	84	84	011	01	08	06	84		05000	

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

OPERATING MODE (8) <input checked="" type="checkbox"/> N	20.402(b)	20.400(c)	00.730(i)(2)(iv)	73.710(i)
POWER LEVEL (10) 0010	20.400(e)(1)(ii)	00.360(i)(1)	00.730(i)(2)(v)	73.710(ii)
	20.400(e)(1)(iii)	00.360(i)(2)	00.730(i)(2)(vi)	OTHER (Specify in Abstract below and in Test, NRC Form 364A)
	20.400(e)(1)(iv)	00.730(i)(2)(ii)	00.730(i)(2)(vii)(A)	
	20.400(e)(1)(v)	00.730(i)(2)(iii)	00.730(i)(2)(viii)(B)	
	20.400(e)(1)(vi)	00.730(i)(2)(iii)	00.730(i)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
B. L. Clark, Senior Engineer - Special Projects	215 841-5017

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)

YES (If you complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

Abstract: 2-84-11

On June 8, 1984, during the present refueling outage contractor personnel were preparing to perform preheat for welding in the Unit 2 drywell. An acetylene leak occurred at the point where the hose is crimped onto the standard screw connection at the cutting torch and resulted in a measured combustible gas (acetylene) concentration of eight percent (8%) lower explosive limit (LEL) and an oxygen deficient atmosphere in the drywell. All personnel in the drywell were evacuated and additional ventilation was utilized to expel the acetylene gas and return a normal oxygen level to the drywell.

As a result of this event, several steps have been taken regarding the handling of acetylene in the drywell.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR 84	SEQUENTIAL NUMBER 011	ALPHABETIC NUMBER 01			
					02	OF	03

TEXT (if more space is required use additional NRC Form 265B (1-77))

Description of the Event:

At approximately 8:30 a.m. on June 8, 1984, during the present refueling outage, a contractor employee, in preparation to perform preheat for welding in the Unit 2 drywell, attached and valved into service one cutting torch to acetylene and oxygen hoses at elevation 203 in the drywell.

After performing these preliminary actions, the contractor employee left to dress for performing the preheat and welding work. Upon returning to the drywell to perform the work, the contractor detected a strong smell of acetylene. The contractor employee reported the problem to contractor safety personnel, who recommended personnel evacuation from the drywell. Personnel were immediately evacuated from the drywell.

Both a contractor safety employee and a welding supervisor entered the drywell with a pretested Syntox explosive tester which alarmed on low oxygen (the low oxygen alarm setpoint of the Syntox explosive tester is set at 19.5% oxygen) and measured a concentration of eight percent (8%) LEL (Lower Explosive Limit) acetylene and eighteen percent (18%) oxygen at elevation 186. The measured eighteen percent oxygen concentration at elevation 186 in the drywell was considered an oxygen deficient atmosphere; therefore, the two personnel immediately evacuated the drywell. The measured eight percent LEL acetylene concentration at elevation 186 was determined to represent an acetylene atmospheric concentration of zero point two percent (0.2%) acetylene in the drywell.

As a mitigating measure, a second equipment cell fan and the Reactor Building exhaust fan were turned on to supplement the drywell purge and equipment cell fan. In addition, maximum ventilation was provided to the drywell by the reactor building and refuel floor supply fans.

A subsequent check of the drywell with a pretested Syntox explosive tester at approximately 1:30 p.m. measured no trace of acetylene and a twenty-one percent oxygen concentration at elevation 203.

The supplemental ventilation sufficiently expelled the acetylene gas and returned a normal oxygen level to the drywell. The Syntox explosive tester was satisfactorily tested to verify its proper operation following the 1:30 p.m. measurement.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (if more space is required, use additional NRC Form 366c) (17)

During the follow-up investigation, the acetylene torch was examined and both valves to the torch were found closed. The oxygen side was found pressurized, but the acetylene side was depressurized. Additional investigation identified that the acetylene leakage occurred at the point where the hose is crimped onto the standard screw connection at the cutting torch.

Consequences of the Event:

The immediate action taken following the event was removal of all acetylene bottles from the reactor building. Following licensee review and approval of new contractor requirements, the contractor was given approval to return acetylene and oxygen gas to Unit 2 drywell on June 21, 1984.

Cause of the Event:

Investigation of the event discovered a leak at the point where the acetylene hose is crimped onto the standard screw connection.

Corrective Actions:

New control measures were written for controlling acetylene within the drywell. These measures are included within the document 'Burning and Cutting Requirements for Pipe Replacement within the Drywell'. Among these control measures are instructions requiring leak testing and the verification of the absence of leaks on all acetylene equipment from the bottle to the torch. Personnel are also required to be stationed inside the drywell whenever acetylene is valved into service.

PHILADELPHIA ELECTRIC COMPANY

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August 6, 1984

Docket No. 50-277

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

SUBJECT: Licensee Event Report

This revision of a previously submitted LER concerns an acetylene leak in the Unit 2 drywell during outage work. This revision provides additional quantitative information regarding the concentration of acetylene discovered in the Unit 2 drywell and provides an enhanced description of the event. The revised sections of this LER are identified by a vertical bar in the margin.

Reference:	Docket No. 50-277
Report Number:	2-84-11
Revision Number:	01
Event Date:	June 8, 1984
Report Date:	August 6, 1984
Facility:	Peach Bottom Atomic Power Station RD #1, Box 208, Delta, PA 17314

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

Very truly yours,

*W. M. Alden*  
for

R. H. Logue  
Superintendent  
Nuclear Services

cc: Dr. Thomas E. Murley, Administrator  
Mr. A. R. Blough, Site Inspector

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