NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

# LICENSEE EVENT REPORT (LER)

| FACILITY NAME (1) | DOCKET NUMBER (2) | PAGE (3) |
|---|---|---|
| Peach Bottom Atomic Power Station - Unit 2 | 0 5 0 0 0 2 7 7 | 1 OF 3 |

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 NAMES | DOCKET NUMBER(S) |
| 0 6 | 0 8 | 8 4 | 8 4 | — 0 1 1 | — 0 0 | 0 7 | 0 9 | 3 4 | | 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) | 0 0 0 | 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) | 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) | X 50.73(a)(2)(x) | |

LICENSEE CONTACT FOR THIS LER (12)

| NAME | TELEPHONE NUMBER |
|---|---|
| B. L. Clark, Senior Engineer - Special Projects | AREA CODE 2 1 5 8 4 1 - 5 0 1 7 |

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 |
|---|---|---|---|---|---|
| YES (If yes, complete EXPECTED SUBMISSION DATE) | X NO | | | | |

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 while preparing to perform preheat for welding in the Unit 2 drywell, an acetylene leak at the point where the hose is crimped onto the standard screw connection in a cutting torch resulted in a combustible gas (acetylene) concentration in the drywell above the lower explosive limit. All personnel in the drywell were evacuated and additional ventilation was utilized to expel the gas.

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


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| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|---|---|---|---|---|---|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | |
| Peach Bottom Atomic Power Station - Unit 2 | 0 5 0 0 0 2 7 7 | 8 4 | — 0 1 1 | — 0 0 | 0 2 OF 0 3 |

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

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 and measured a concentration of eight percent (8%) acetylene and eighteen percent (18%) oxygen at elevation 186. This concentration of acetylene was a threat to the safety of the plant because acetylene is explosive at concentrations between 2.5% and 100%; therefore, these two personnel immediately evacuated from 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 concentration of twenty-one percent oxygen at elevation 203.

Apparently, the added ventilation placed in service was sufficient to expel the gas. Following this measurement, the explosive tester was tested to verify its proper operation.

Following these actions, the acetylene torch was examined and both valves to the torch were found closed. Although the oxygen side was found pressurized, the acetylene side was found empty.

Consequences of the Event:

The immediate action taken following the event was removal of all acetylene bottles from the drywell and 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 absense of leaks of all acetylene equipment from the bottle to the torch and a requirement that personnel be stationed inside the drywell whenever an acetylene bottle is valved into service.

PHILADELPHIA ELECTRIC COMPANY

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July 9, 1984

Docket No. 50-277

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

SUBJECT: Licensee Event Report

This LER concerns an acetylene leak in the Unit 2 drywell during outage work.

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|---|---|
| Reference: | Docket No. 50-277 |
| Report Number: | 2-84-11 |
| Revision Number: | 00 |
| Event Date: | June 8, 1984 |
| Report Date: | July 9, 1984 |
| Facility: | Peach Bottom Atomic Power Station<br>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,

R. H. Logue
Superintendent
Nuclear Services

cc: Dr. Thomas E. Murley, Administrator
Region I, USNRC

Mr. A. R. Blough, Site Inspector

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