

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3160-0104
EXPIRES - 9/31/95

| | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|-------------------|-----------------|----------|-----------|-----------------|-------------------|---|-------------------------------|----------|------------------|----------|-------------------------------|----------|--|--|--|
| FACILITY NAME (1) Limerick Generating Station - Unit 1 | | | | | | | | | | DOCKET NUMBER (2) 0 6 0 0 0 3 5 2 1 | | | | | PAGE (3) 1 OF 0 1 2 | | | | |
| TITLE (4) Control Room Chlorine Analyzer Failure | | | | | | | | | | | | | | | | | | | |
| EVENT DATE (8) | | | LER NUMBER (6) | | | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (9) | | | | | | | | |
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH | DAY | YEAR | FACILITY NAME | | | | DOCKET NUMBER(S) | | | | | | |
| 1 | 11 | 5 | 8 | 4 | 8 | 4 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 3 | 5 | | | |
| THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11) | | | | | | | | | | | | | | | | | | | |
| OPERATING MODE (1) | | | <table border="0" style="width:100%;"> <tr> <td style="width:33%; vertical-align: top;"> 5 20.402(a) 20.406(a)(1)(i) 20.406(a)(1)(ii) 20.406(a)(1)(iii) 20.406(a)(1)(iv) 20.406(a)(1)(v) </td> <td style="width:33%; vertical-align: top;"> 20.409(a) 20.34(a)(1) 20.34(a)(2) 20.73(a)(2)(i) 20.73(a)(2)(ii) 20.73(a)(2)(iii) </td> <td style="width:33%; vertical-align: top;"> <input checked="" type="checkbox"/> 20.73(a)(2)(iv) <input type="checkbox"/> 20.73(a)(2)(v) <input type="checkbox"/> 20.73(a)(2)(vi) <input type="checkbox"/> 20.73(a)(2)(vii)(A) <input type="checkbox"/> 20.73(a)(2)(vii)(B) <input type="checkbox"/> 20.73(a)(2)(viii) </td> </tr> </table> | | | | | | | | | | | | | | 5 20.402(a) 20.406(a)(1)(i) 20.406(a)(1)(ii) 20.406(a)(1)(iii) 20.406(a)(1)(iv) 20.406(a)(1)(v) | 20.409(a) 20.34(a)(1) 20.34(a)(2) 20.73(a)(2)(i) 20.73(a)(2)(ii) 20.73(a)(2)(iii) | <input checked="" type="checkbox"/> 20.73(a)(2)(iv) <input type="checkbox"/> 20.73(a)(2)(v) <input type="checkbox"/> 20.73(a)(2)(vi) <input type="checkbox"/> 20.73(a)(2)(vii)(A) <input type="checkbox"/> 20.73(a)(2)(vii)(B) <input type="checkbox"/> 20.73(a)(2)(viii) |
| 5 20.402(a) 20.406(a)(1)(i) 20.406(a)(1)(ii) 20.406(a)(1)(iii) 20.406(a)(1)(iv) 20.406(a)(1)(v) | 20.409(a) 20.34(a)(1) 20.34(a)(2) 20.73(a)(2)(i) 20.73(a)(2)(ii) 20.73(a)(2)(iii) | <input checked="" type="checkbox"/> 20.73(a)(2)(iv) <input type="checkbox"/> 20.73(a)(2)(v) <input type="checkbox"/> 20.73(a)(2)(vi) <input type="checkbox"/> 20.73(a)(2)(vii)(A) <input type="checkbox"/> 20.73(a)(2)(vii)(B) <input type="checkbox"/> 20.73(a)(2)(viii) | | | | | | | | | | | | | | | | | |
| POWER LEVEL (10) 0, 0, 0 | | | <table border="0" style="width:100%;"> <tr> <td style="width:33%;"></td> <td style="width:33%;"></td> <td style="width:33%;"> 73.71(i) 73.71(ii) OTHER (Specify in Abstract below and in Test, NRC Form 366A) </td> </tr> </table> | | | | | | | | | | | | | | | | 73.71(i) 73.71(ii) OTHER (Specify in Abstract below and in Test, NRC Form 366A) |
| | | 73.71(i) 73.71(ii) OTHER (Specify in Abstract below and in Test, NRC Form 366A) | | | | | | | | | | | | | | | | | |
| LICENSEE CONTACT FOR THIS LER (12) | | | | | | | | | | | | | | | | | | | |
| NAME | | | | | | | | | | TELEPHONE NUMBER | | | | | | | | | |
| B. L. Clark, Senior Engineer-Special Projects | | | | | | | | | | 2 1 5 8 4 1 - 5 0 1 | | | | | | | | | |
| 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 | | | | | | | | | | |
| B | V | I | A | EM 0 2 8 | Y | | | | | | | | | | | | | | |
| SUPPLEMENTAL REPORT EXPECTED (14) | | | | | | | | | | | | | | | | | | | |
| YES (If yes, complete EXPECTED SUBMISSION DATE) | | | | | | | | | | NO | | | | | | | | | |
| | | | | | | | | | | <input checked="" type="checkbox"/> | | | | | | | | | |
| ABSTRACT (Limit to 1400 words, i.e., approximately fifteen single-space typewritten lines) (15) | | | | | | | | | | | | | | | | | | | |
| Abstract: 84-008 Prior to initial criticality on November 15, 1984, the main control room chlorine analyzer failed high due to equipment malfunction causing an isolation of control room ventilation and starting of the emergency fresh air fan. Investigation determined that the sample tape had broken causing the detector to indicate full scale. The broken tape was promptly replaced, the appropriate calibration was performed, and the analyzer declared operable. | | | | | | | | | | | | | | | | | | | |

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

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

| | | | | | | | |
|--|--|----------------|-------------------|-----------------|----------|----|-----|
| FACILITY NAME (1) Limerick Generating Station Unit 1 | DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 8 4 | LER NUMBER (5) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 84 | 0 0 8 | 0 0 | 0 2 | OF | 0 2 |

TEXT (if more space is required, use additional NRC Form 364a (1/7))

Description of the Event:

At approximately 0300 on November 15, the main control room 'D' chlorine analyzer (AE-78-016D) failed high causing the normal ventilation system to isolate and the Emergency Fresh Air Supply System Train 'B' to start.

Consequences of the Event:

Technical Specification 3.3.7.8.1.a permits operation in the normal ventilation mode with one chlorine detection subsystem inoperable for up to seven days. The failed subsystem was returned to service within 24 hours.

Cause of the Event:

Investigation determined that the MDA Scientific Model 740 FAN chlorine analyzer had suffered a broken sampling tape.

Corrective Actions:

Instrument and Controls personnel replaced the sample tape and satisfactorily performed applicable sections of appropriate surveillance test and returned analyzer to service.

Actions Taken to Prevent Recurrence:

An investigation into the cause of the tape breakage has been undertaken in concert with the equipment manufacturer. Several modifications are being considered as the result of these investigations, one of which, relocation of sample pumps to reduce vibrations, was completed on December 4, 1984.

LICENSEE EVENT REPORT (LER)

APPROVED ONS NO. 3160-0104
EXPIRES - 8/31/85

FACILITY NAME (1)

Limerick Generating Station - Unit 1

DOCKET NUMBER (2)

0161010101315121 OF 012

PAGE (3)

TITLE (4)

Control Room Chlorine Analyzer Failure

| 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 | 8 | 8 | 4 | 8 | 4 | 1 | 2 | 4 | 8 | 4 | 0 | 5 | 0 | 0 | 0 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPERATING MODE (9) | | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | <table border="0"><tr><td>20.402(a)</td><td>20.408(a)</td><td><input checked="" type="checkbox"/></td><td>80.73(a)(1)(iv)</td><td>73.71(a)</td></tr><tr><td>20.406(a)(1)(i)</td><td>80.36(a)(1)</td><td></td><td>80.73(a)(1)(v)</td><td>73.71(a)</td></tr><tr><td>20.406(a)(1)(ii)</td><td>80.36(a)(2)</td><td></td><td>80.73(a)(1)(vi)</td><td></td></tr><tr><td>20.406(a)(1)(iii)</td><td>80.73(a)(1)(i)</td><td></td><td>80.73(a)(1)(vii)(A)</td><td></td></tr><tr><td>20.406(a)(1)(iv)</td><td>80.73(a)(1)(ii)</td><td></td><td>80.73(a)(1)(viii)(B)</td><td></td></tr><tr><td>20.406(a)(1)(v)</td><td>80.73(a)(1)(iii)</td><td></td><td>80.73(a)(1)(ix)</td><td></td></tr></table> | | | | | | | | | | | | | | | 20.402(a) | 20.408(a) | <input checked="" type="checkbox"/> | 80.73(a)(1)(iv) | 73.71(a) | 20.406(a)(1)(i) | 80.36(a)(1) | | 80.73(a)(1)(v) | 73.71(a) | 20.406(a)(1)(ii) | 80.36(a)(2) | | 80.73(a)(1)(vi) | | 20.406(a)(1)(iii) | 80.73(a)(1)(i) | | 80.73(a)(1)(vii)(A) | | 20.406(a)(1)(iv) | 80.73(a)(1)(ii) | | 80.73(a)(1)(viii)(B) | | 20.406(a)(1)(v) | 80.73(a)(1)(iii) | | 80.73(a)(1)(ix) | |
| 20.402(a) | 20.408(a) | <input checked="" type="checkbox"/> | 80.73(a)(1)(iv) | 73.71(a) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(i) | 80.36(a)(1) | | 80.73(a)(1)(v) | 73.71(a) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(ii) | 80.36(a)(2) | | 80.73(a)(1)(vi) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(iii) | 80.73(a)(1)(i) | | 80.73(a)(1)(vii)(A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(iv) | 80.73(a)(1)(ii) | | 80.73(a)(1)(viii)(B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(v) | 80.73(a)(1)(iii) | | 80.73(a)(1)(ix) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)

NAME

B. L. Clark, Senior Engineer-Special Projects

TELEPHONE NUMBER

AREA CODE

215 841-5014

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 |
|-------|--------|-----------|--------------|-------------------|-------|--------|-----------|--------------|-------------------|
| B | VLI | LI | IA | E | M | IO | 2 | 8 | Y |
| | | | | | | | | | |
| | | | | | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)

YES (if yes, complete EXPECTED SUBMISSION DATE)

NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

Abstract: 84-010

Prior to initial criticality, a failure of the 'D' control chlorine detector caused the normal ventilation to isolate and the 'B' train of the Control Room Emergency Fresh Air System to start. Investigation determined that the sample tape had broken causing the analyzer to indicate full scale. The tape was replaced and the analyzer was tested and returned to service.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

| | | | | | | | |
|--|--|----------------|----------------------|--------------------|----------|----|-----|
| FACILITY NAME (1) Limerick Generating Station Unit 1 | DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 8 4 | LER NUMBER (5) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 84 | 0110 | 010 | 012 | OF | 012 |

TEXT (if more space is required, use additional NRC Form 364A (1))

Description of the Event:

At approximately 0945 on November 18, 1984, the operators received an alarm "Control Room Chlorine Initiated" and the 'B' train of Control Room Emergency Fresh Air System (an engineering safety feature) started. A similar event was reported in LER 84-008.

Consequences of the Event:

Technical Specification 3.3.7.8.1a permits operation in the normal ventilation mode with one chlorine detection subsystem inoperable for up to seven days. The failed analyzer was returned to service with 24 hours, so the consequences of this event are minimal.

Cause of the Event:

Investigation determined that the sample tape of the 'D' chlorine analyzer (AE-78-016D), an MDA Scientific, Inc. Model 740 FAN, had broken causing the analyzer to indicate full scale.

Corrective Actions:

Instrument and Controls technicians replaced the sample tape and a checkout out and calibration was completed. The analyzer was tested satisfactorily and returned to service.

Actions to Prevent Recurrence:

An investigation into the cause of the tape breakage has been undertaken in concert with the equipment manufacturer. Several modifications are being considered as the result of these investigations, one of which, relocation of sample pumps to reduce vibrations, was completed on December 4, 1984.

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

December 14, 1984

Docket No. 50-352

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

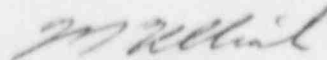
SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

These LERs deal with the failure of the 'D' Control Room
Chlorine analyzer prior to initial criticality.

| | |
|------------------|---|
| Reference: | Docket No. 352 |
| Report Numbers: | 84-008 and 84-010 |
| Revision Number: | 00 00 |
| Event Date: | November 15, 1984 and November 18, 1984 |
| Report Date: | December 14, 1984 |
| Facility: | Limerick Generating Station P.O. Box A, Sanatoga, PA 19464 |

These LERs are submitted pursuant to the requirements of 10
CFR 50.73(a)(2)(iv).

Very truly yours,



W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator
Region I, USNRC
J. T. Wiggins, Senior Site Inspector
See Service List

IE22
11

cc: Judge Helen F. Hoyt
Judge Jerry Harbour
Judge Richard F. Cole
Judge Christine N. Kohl
Judge Gary J. Edles
Judge Reginald L. Gotchy
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James Wiggins
Timothy R. S. Campbell