



**PECO NUCLEAR**

A UNIT OF PECO ENERGY

PECO Energy Company  
PO Box 2300  
Sanatoga, PA 19464-0920

T.S.6.9.1.6

April 9, 1997

Docket Nos. 50-352  
50-353  
License Nos. NPF-39  
NPF-85

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

Subject: Limerick Generating Station  
Monthly Operating Report For Units 1 and 2

Enclosed are the monthly operating reports for Limerick Units 1 and 2 for the month of March 1997 forwarded pursuant to Technical Specification 6.9.1.6.

Very truly yours,

Edward F. Sproat, III  
Director - Site Engineering

bec

Enclosures

cc: H. J. Miller, Administrator, Region I, USNRC  
N. S. Perry, USNRC Senior Resident Inspector LGS  
W. G. MacFarland, Vice President, LGS

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PDR ADOCK 05000352  
R PDR



Limerick Generating Station  
Unit 1  
March 1 through March 31, 1997

I. Narrative Summary of Operating Experiences

Unit 1 began the month of March 1997 at a nominal 100% of rated thermal power (RTP).

On March 1, 1997 at 0303 hours, power was reduced to 98% of RTP for main turbine valve testing. Power was restored to 100% RTP at 0351 hours.

On March 7, 1997 at 2210 hours, power was reduced to 98% of RTP for main turbine valve testing. Power was restored to 100% RTP at 2318 hours.

On March 14, 1997 at 2300 hours, power was reduced to 98% of RTP for main turbine valve testing. Power was restored to 100% RTP at 2318 hours.

On March 21, 1997 at 2300 hours, power was reduced to 92% of RTP for main turbine valve testing. Power was restored to 100% RTP on March 22, 1997 at 0110 hours.

On March 28, 1997 at 2200 hours, power was reduced to 98% of RTP for main turbine valve testing. Power was restored to 100% RTP on March 28 at 2300 hours.

Unit 1 ended this month operating at 100% RTP.

II. Challenges to Main Steam Safety Relief Valves

There were no challenges to the Main Steam Safety Relief Valves during the month of March.

# AVERAGE DAILY POWER LEVEL

DOCKET NO. 50 - 352  
UNIT LIMERICK UNIT 1  
DATE APRIL 9, 1997  
COMPANY PECO ENERGY COMPANY  
BRUCE E. CANFIELD  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION  
TELEPHONE (610) 718-3794

MONTH MARCH, 1997

DAY AVERAGE DAILY POWER LEVEL  
(MWE-NET)

|    |      |
|----|------|
| 1  | 1115 |
| 2  | 1110 |
| 3  | 1119 |
| 4  | 1119 |
| 5  | 1119 |
| 6  | 1115 |
| 7  | 1123 |
| 8  | 1115 |
| 9  | 1119 |
| 10 | 1119 |
| 11 | 1119 |
| 12 | 1123 |
| 13 | 1119 |
| 14 | 1119 |
| 15 | 1118 |
| 16 | 1123 |

DAY AVERAGE DAILY POWER LEVEL  
(MWE-NET)

|    |      |
|----|------|
| 17 | 1119 |
| 18 | 1115 |
| 19 | 1115 |
| 20 | 1115 |
| 21 | 1107 |
| 22 | 1103 |
| 23 | 1116 |
| 24 | 1120 |
| 25 | 1112 |
| 26 | 1103 |
| 27 | 1102 |
| 28 | 1090 |
| 29 | 1095 |
| 30 | 1098 |
| 31 | 1101 |

# OPERATING DATA REPORT

DOCKET NO. 50 - 352  
 DATE APRIL 9, 1997  
 COMPLETED BY PECO ENERGY COMPANY  
 BRUCE E. CANFIELD  
 REPORTS ENGINEER  
 SITE ENGINEERING  
 LIMERICK GENERATING STATION  
 TELEPHONE (610) 718-3794

## OPERATING STATUS

1. UNIT NAME: LIMERICK UNIT 1  
 2. REPORTING PERIOD: MARCH, 1997  
 3. LICENSED THERMAL POWER(MWT): 3456  
 4. NAMEPLATE RATING (GROSS MWE): 1120  
 5. DESIGN ELECTRICAL RATING (NET MWE): 1105  
 6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1145  
 7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1105  
 8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS:

9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWE):

10. REASONS FOR RESTRICTIONS, IF ANY:

NOTES: THERE WERE NO LOAD DROPS  
 GREATER THAN 20% THIS MONTH.

|   | THIS MONTH | YR-TO-DATE | CUMULATIVE  |
|---|------------|------------|-------------|
| 11. HOURS IN REPORTING PERIOD               | 744        | 2,160      | 97,848      |
| 12. NUMBER OF HOURS REACTOR WAS CRITICAL    | 744.0      | 2,160.0    | 82,287.4    |
| 13. REACTOR RESERVE SHUTDOWN HOURS          | 0.0        | 0.0        | 0.0         |
| 14. HOURS GENERATOR ON-LINE                 | 744.0      | 2,160.0    | 80,920.0    |
| 15. UNIT RESERVE SHUTDOWN HOURS             | 0.0        | 0.0        | 0.0         |
| 16. GROSS THERMAL ENERGY GENERATED (MWH)    | 2,570,899  | 7,462,708  | 253,216,871 |
| 17. GROSS ELECTRICAL ENERGY GENERATED (MWH) | 854,300    | 2,488,600  | 82,560,380  |
| 18. NET ELECTRICAL ENERGY GENERATED (MWH)   | 828,168    | 2,409,513  | 79,342,610  |

# OPERATING DATA REPORT (CONTINUED)

DOCKET NO. 50 - 352

DATE APRIL 9, 1997

|  | THIS MONTH   | YR-TO-DATE | CUMULATIVE |
|--|--------------|------------|------------|
| 19. UNIT SERVICE FACTOR  | 100.0 %      | 100.0 %    | 82.7 %     |
| 20. UNIT AVAILABILITY FACTOR   | 100.0 %      | 100.0 %    | 82.7 %     |
| 21. UNIT CAPACITY FACTOR (USING MDC NET)   | 100.7 %      | 101.0 %    | 76.4 %     |
| 22. UNIT CAPACITY FACTOR (USING DER NET)   | 100.7 %      | 101.0 %    | 76.4 %     |
| 23. UNIT FORCED OUTAGE RATE  | .0 %         | .0 %       | 4.1 %      |
| 24. SHUTDOWNS SCHEDULED OVER THE NEXT 6 MONTHS (TYPE, DATE AND DURATION OF EACH):<br>PLANNED MAINT OUTAGE, 4/11/97, SCHEDULED 2 DAY DURATION |              |            |            |
| 25. IF SHUTDOWN AT THE END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:  |              |            |            |
| 26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATIONS):   | FORECAST     | ACHIEVED   |            |
| INITIAL CRITICALITY  | 12/19/84     | 12/22/84   |            |
| INITIAL ELECTRICITY  | MID APRIL 85 | 04/13/85   |            |
| COMMERCIAL OPERATION   | 1ST QTR 86   | 02/01/86   |            |

# UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50 - 352  
UNIT NAME LIMERICK UNIT 1  
DATE APRIL 9, 1997  
COMPLETED BY PECO ENERGY COMPANY  
BRUCE E. CANFIELD  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION  
TELEPHONE (610) 718-3794

REPORT MONTH MARCH, 1997

| NO.         | DATE   | TYPE<br>(1) | DURATION<br>(HOURS) | REASON<br>(2) | METHOD OF<br>SHUTTING DOWN<br>REACTOR (3) | LICENSEE<br>EVENT<br>REPORT # | SYSTEM<br>CODE<br>(4) | COMPONENT<br>CODE<br>(5) | CAUSE AND CORRECTIVE<br>ACTION TO<br>PREVENT RECURRENCE             |
|-------------|--------|-------------|---------------------|---------------|---|-------------------------------|-----------------------|--------------------------|---|
| 181         | 970301 | S           | 1.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 98% DUE TO MAIN TURBINE VALVE TESTING. |
| 182         | 970307 | S           | 1.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 98% DUE TO MAIN TURBINE VALVE TESTING. |
| 183         | 970314 | S           | 1.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 98% DUE TO MAIN TURBINE VALVE TESTING. |
| 184         | 970321 | S           | 2.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 92% DUE TO MAIN TURBINE VALVE TESTING  |
| 185         | 970329 | S           | 1.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 98% DUE TO MAIN TURBINE VALVE TESTING  |
| TOTAL HOURS |        |             | 6.0                 |               |   |                               |                       |                          |   |

(1)  
F - FORCED  
S - SCHEDULED

(2)  
REASON  
A - EQUIPMENT FAILURE (EXPLAIN)  
B - MAINTENANCE OR TEST  
C - REFUELING  
D - REGULATORY RESTRICTION  
E - OPERATOR TRAINING + LICENSE EXAMINATION  
F - ADMINISTRATIVE  
G - OPERATIONAL ERROR (EXPLAIN)  
H - OTHER (EXPLAIN)

(3)  
METHOD  
1 - MANUAL  
2 - MANUAL SCRAM  
3 - AUTOMATIC SCRAM  
4 - OTHER (EXPLAIN)

(4)  
EXHIBIT G - INSTRUCTIONS  
FOR PREPARATION OF DATA  
ENTRY SHEETS FOR LICENSEE  
EVENT REPORT (LER)  
FILE (NUREG-0161)

(5)  
EXHIBIT I - SAME SOURCE

Limerick Generating Station  
Unit 2  
March 1 through March 28, 1997

I. Narrative Summary of Operating Experiences

Unit 2 began the month of March 1997 at 25% rated thermal power (RTP) in power ascension from a refueling outage.

On March 3, 1997 Power was restored to 100% RTP at 1509 hours.

On March 4, 1997 at 2025 hours, power was reduced to 65% of RTP due to a feedwater heat exchanger leak. Power was restored to 100% RTP on March 7, 1997 at 0044 hours.

On March 8, 1997 at 2214 hours, power was reduced to 88% of RTP for main turbine valve testing. Power was restored to 100% RTP on March 9, at 0059 hours.

On March 15, 1997 at 1345 hours, power was reduced to 98% of RTP for main turbine valve testing. Power was restored to 100% RTP at 1428 hours.

On March 23, 1997 at 0740 hours, power was reduced to 85% of RTP due to a main transformer high combustible gas reading. Power was restored to 100% RTP on March 24, at 0120 hours.

On March 27, 1997 at 1436 hours, power was reduced to 86% of RTP due to turbine generator excitor alterex in contact with its bearing.

Unit 2 ended this operating period at 22% of RTP.

II. Challenges to Main Steam Safety Relief Valves

There were no challenges to the Main Steam Safety Relief Valves during the month of March.



# AVERAGE DAILY POWER LEVEL

DOCKET NO. 50 - 353  
 UNIT LIMERICK UNIT 2  
 DATE APRIL 9, 1997  
 COMPANY PECO ENERGY COMPANY  
 BRUCE E. CANFIELD  
 REPORTS ENGINEER  
 SITE ENGINEERING  
 LIMERICK GENERATING STATION  
 TELEPHONE (610) 718-3794

MONTH MARCH, 1997

DAY AVERAGE DAILY POWER LEVEL  
(MWE-NET)

|    |      |
|----|------|
| 1  | 309  |
| 2  | 686  |
| 3  | 1075 |
| 4  | 1044 |
| 5  | 901  |
| 6  | 961  |
| 7  | 1140 |
| 8  | 1123 |
| 9  | 1135 |
| 10 | 1135 |
| 11 | 1130 |
| 12 | 1138 |
| 13 | 1138 |
| 14 | 1129 |
| 15 | 1132 |
| 16 | 1138 |

DAY AVERAGE DAILY POWER LEVEL  
(MWE-NET)

|    |      |
|----|------|
| 17 | 1130 |
| 18 | 1130 |
| 19 | 1134 |
| 20 | 1125 |
| 21 | 1120 |
| 22 | 935  |
| 23 | 1021 |
| 24 | 1131 |
| 25 | 1131 |
| 26 | 1110 |
| 27 | 1004 |
| 28 | 775  |
| 29 | 792  |
| 30 | 771  |
| 31 | 0    |



# OPERATING DATA REPORT

DOCKET NO 50 - 353  
 DATE APRIL 9, 1997  
 COMPLETED BY PEC ENERGY COMPANY  
 BRUCE E. CANFIELD  
 REPORTS ENGINEER  
 SITE ENGINEERING  
 LIMERICK GENERATING STATION  
 TELEPHONE (610) 718-3794

## OPERATING STATUS

1. UNIT NAME: LIMERICK UNIT 2
2. REPORTING PERIOD: MARCH, 1997
3. LICENSED THERMAL POWER(MWT): 3458
4. NAMEPLATE RATING (GROSS MWE): 1163
5. DESIGN ELECTRICAL RATING (NET MWE): 1115
6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1155
7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1115
8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS 3 THROUGH 7 ) SINCE LAST REPORT, GIVE REASONS:  
 IN CONTACT WITH ITS
9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWE):
10. REASONS FOR RESTRICTIONS, IF ANY:

NOTES: THERE WERE 2 LOAD DROPS  
 GREATER THAN 20% THIS MONTH  
 DUE TO RECIRC PUMP  
 VIBRATION/6B FEEDWATER HTR  
 LEAK AND TURB GEN ALTEREX  
 BEARING

|   | THIS MONTH | YR-TO-DATE | CUMULATIVE  |
|---|------------|------------|-------------|
| 11. HOURS IN REPORTING PERIOD               | 744        | 2,160      | 63,360      |
| 12. NUMBER OF HOURS REACTOR WAS CRITICAL    | 744.0      | 1,519.8    | 57,547.0    |
| 13. REACTOR RESERVE SHUTDOWN HOURS          | 0.0        | 0.0        | 0.0         |
| 14. HOURS GENERATOR ON-LINE                 | 720.0      | 1,447.6    | 56,386.7    |
| 15. UNIT RESERVE SHUTDOWN HOURS             | 0.0        | 0.0        | 0.0         |
| 16. GROSS THERMAL ENERGY GENERATED (MWH)    | 2,256,453  | 4,240,593  | 180,665,337 |
| 17. GROSS ELECTRICAL ENERGY GENERATED (MWH) | 759,700    | 1,400,500  | 59,790,780  |
| 18. NET ELECTRICAL ENERGY GENERATED (MWH)   | 734,774    | 1,347,220  | 57,651,951  |

# OPERATING DATA REPORT (CONTINUED)

DOCKET NO. 50 - 353

DATE APRIL 9, 1997

|   | THIS MONTH | YR-TO-DATE | CUMULATIVE |
|---|------------|------------|------------|
| 19. UNIT SERVICE FACTOR   | 96.8 %     | 67.0 %     | 89.0 %     |
| 20. UNIT AVAILABILITY FACTOR  | 96.8 %     | 67.0 %     | 89.0 %     |
| 21. UNIT CAPACITY FACTOR (USING MDC NET)  | 88.6 %     | 55.9 %     | 84.8 %     |
| 22. UNIT CAPACITY FACTOR (USING DER NET)  | 88.6 %     | 55.9 %     | 84.8 %     |
| 23. UNIT FORCED OUTAGE RATE   | .0 %       | .0 %       | 3.5 %      |
| 24. SHUTDOWNS SCHEDULED OVER THE NEXT 6 MONTHS (TYPE, DATE AND DURATION OF EACH):<br>PLANNED MAINT OUTAGE, 3/31/97 SCHEDULED 4 DAY DURATION |            |            |            |
| 25. IF SHUTDOWN AT THE END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:   | 4/03/97    |            |            |
| 26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATIONS):  | FORECAST   | ACHIEVED   |            |
| INITIAL CRITICALITY   | 08/12/89   | 08/12/89   |            |
| INITIAL ELECTRICITY   | 09/01/89   | 09/01/89   |            |
| COMMERCIAL OPERATION  | 02/01/90   | 01/08/90   |            |

# UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50 - 353  
UNIT NAME LIMERICK UNIT 2  
DATE APRIL 9, 1997  
COMPLETED BY PECO ENERGY COMPANY  
BRUCE E. CANFIELD  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION  
TELEPHONE (610) 718-3794

REPORT MONTH MARCH, 1997

| NO.         | DATE   | TYPE<br>(1) | DURATION<br>(HOURS) | REASON<br>(2) | METHOD OF<br>SHUTTING DOWN<br>REACTOR (3) | LICENSEE<br>EVENT<br>REPORT # | SYSTEM<br>CODE<br>(4) | COMPONENT<br>CODE<br>(5) | CAUSE AND CORRECTIVE<br>ACTION TO<br>PREVENT RECURRENCE  |
|-------------|--------|-------------|---------------------|---------------|---|-------------------------------|-----------------------|--------------------------|--|
| 167         | 970304 | F           | 28.0                | A             | 4   | N/A                           | CH                    | HTEXCH                   | REACTOR POWER WAS REDUCED TO 65% DUE TO<br>FEEDWATER HEAT EXCHANGER LEAK.                                    |
| 168         | 970308 | S           | 2.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 88% DUE TO<br>MAIN TURBINE VALVE TESTING.                                       |
| 169         | 970315 | S           | 1.0                 | B             | 4   | N/A                           | HA                    | VALVEX                   | REACTOR POWER WAS REDUCED TO 98% DUE TO<br>MAIN TURBINE VALVE TESTING.                                       |
| 170         | 970323 | F           | 17.0                | A             | 4   | N/A                           | EG                    | TRANSF                   | REACTOR POWER WAS REDUCED TO 85% DUE TO<br>MAIN TRANSFORMER HIGH COMBUSTIBLE GAS<br>READING.                 |
| 171         | 970327 | F           | 105.0               | A             | 4   | N/A                           | HA                    | TURBIN                   | REACTOR POWER WAS REDUCED TO 86% DUE TO<br>TURBINE GENERATOR EXCITOR ALTEREX IN<br>CONTACT WITH ITS BEARING. |
| TOTAL HOURS |        |             | 153.0               |               |   |                               |                       |                          |  |

(1)  
F - FORCED  
S - SCHEDULED

(2)  
REASON  
A - EQUIPMENT FAILURE (EXPLAIN)  
B - MAINTENANCE OR TEST  
C - REFUELING  
D - REGULATORY RESTRICTION  
E - OPERATOR TRAINING + LICENSE EXAMINATION  
F - ADMINISTRATIVE  
G - OPERATIONAL ERROR (EXPLAIN)  
H - OTHER (EXPLAIN)

(3)  
METHOD  
1 - MANUAL  
2 - MANUAL SCRAM  
3 - AUTOMATIC SCRAM  
4 - OTHER (EXPLAIN)

(4)  
EXHIBIT C - INSTRUCTIONS  
FOR PREPARATION OF DATA  
ENTRY SHEETS FOR LICENSEE  
EVENT REPORT (LER)  
FILE (NUREG-0161)

(5)  
EXHIBIT I - SAME SOURCE