



PECO ENERGY

PECO Energy Company  
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T.S.6.9.1.6

September 14, 1995

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 August 1995 forwarded  
pursuant to Technical Specification 6.9.1.6.

Very truly yours,

*Gary J. Reid for M.P. Gallagher*

Michael P. Gallagher  
Director - Site Engineering

drh

Enclosures

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

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Limerick Generating Station  
Unit 1  
August 1 through August 31, 1995

i. Narrative Summary of Operating Experiences

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

- On August 1, 2, 3, 4, 5, 12, 14, 16, 17, 1995, power was reduced slightly due to high turbine backpressure as a result of elevated outside air temperature. Power was restored to 100% RTP when turbine backpressure was returned to acceptable values.
- On August 6, 1995, at 0140 hours, power was reduced to 90% RTP for main turbine valve testing and control rod exercise testing. Power was restored to 100% RTP at 0857 hours.
- On August 8, 1995, at 2110 hours, the A reactor feedwater pump minimum flow valve failed open. This resulted in a reactor pressure vessel level decrease of 15". The RO responded by increasing flow to the vessel, however the B reactor feedpump tripped due to low suction pressure and both reactor recirculation pumps ran back to their high flow limiter. Off-normal procedures were entered and appropriate actions taken. An operator was dispatched to close the A reactor feedpump minimum flow line manual isolation valve and the Unit was stabilized at 71% RTP. The failure of the minimum flow valve was the result of a failed power supply. The Unit was returned to 100% power on August 9, 1995, at 1616 hours.
- On August 13, 1995, at 1325 hours, power was reduced to 95% RTP for control rod exercise testing. Power was restored to 100% RTP, at 1620 hours.
- On August 20, 1995, at 0600 hours, power reductions began for a planned outage to replace a failed fuel bundle. The main turbine was removed from service at 1316 hours, and the unit was scrammed using the mode switch at 1401 hours. The unit entered operational condition 4, cold shutdown, at 0315 hours, on August 21, 1995. The leaking fuel bundle was replaced and the Unit entered operational condition 2, Startup, at 1520 hours, on August 27, 1995. The unit went critical at 2045 hours.
- On August 28, 1995, during startup activities, with the reactor pressure vessel at approximately 820 psig, an increase in drywell pressure was observed. Off-normal procedures were entered and reactor pressure was reduced. However, there was indication of unidentified leakage into the drywell and the reactor was manually shutdown at 0652 hours. An unusual event was declared at 0734 hours due to the unusual shutdown of the unit. The unusual event was terminated at 0830 hours with the unit stable in hot shutdown. The leakage was due to a misaligned reactor pressure vessel instrument flange connection following fuel replacement activities. The Unit entered operational condition 4 and the flange connection was properly aligned.

Unit 1 ended this operating period in operational condition 4, cold shutdown.

ii. Challenges to Main Steam Safety Relief Valves

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

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50 - 352

UNIT LIMERICK UNIT 1

DATE SEPTEMBER 13, 1995

COMPANY PECO ENERGY COMPANY

DAVID R. HENRICKS  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION

TELEPHONE (610) 718-3772

MONTH AUGUST 1995

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	1012	17	1002
2	1004	18	1039
3	1004	19	1039
4	1004	20	403
5	1024	21	0
6	1016	22	0
7	1045	23	0
8	1005	24	0
9	944	25	0
10	1029	26	0
11	1025	27	0
12	1020	28	0
13	1028	29	0
14	1024	30	0
15	1039	31	0
16	1023		

# OPERATING DATA REPORT

DOCKET NO. 50 - 352

DATE SEPTEMBER 13, 1995

COMPLETED BY PECO ENERGY COMPANY

DAVID R. HENRICKS  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION  
TELEPHONE (610) 718-3772

## OPERATING STATUS

1. UNIT NAME: LIMERICK UNIT 1  
2. REPORTING PERIOD: AUGUST, 1995  
3. LICENSED THERMAL POWER(MWT): 3293  
4. NAMEPLATE RATING (GROSS MWE): 1092  
5. DESIGN ELECTRICAL RATING (NET MWE): 1055  
6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1092  
7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1055

NOTES: THERE WERE 2 LOAD DROPS  
GREATER THAN 20% THIS MONTH  
DUE TO REACTOR FEED WATER PUMP  
MIN FLOW VALVE FAILURE AND A  
PLANNED OUTAGE TO REPLACE A  
FAILED FUEL BUNDLE.

8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS NUMBER 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS:

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

10. REASONS FOR RESTRICTIONS, IF ANY:

	THIS MONTH	YR-TO-DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	744	5,831	83,975
12. NUMBER OF HOURS REACTOR WAS CRITICAL	480.1	5,466.4	69,574.7
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
14. HOURS GENERATOR ON-LINE	469.3	5,419.1	68,444.6
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	1,516,442	17,620,112	211,936,650
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	492,300	5,742,300	68,926,580
18. NET ELECTRICAL ENERGY GENERATED (MWH)	471,205	5,542,451	66,186,457

DATE SEPTEMBER 13, 1995

	THIS MONTH	YR-TO-DATE	CUMULATIVE
19. UNIT SERVICE FACTOR	63.1	92.9	81.5
20. UNIT AVAILABILITY FACTOR	63.1	92.9	81.5
21. UNIT CAPACITY FACTOR (USING MDC NET)	60.0	90.1	74.7
22. UNIT CAPACITY FACTOR (USING DER NET)	60.0	90.1	74.7
23. UNIT FORCED OUTAGE RATE	0.0	0.7	4.0

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):  
 1. PLANNED OUTAGE/REPLACE FAILED FUEL BUNDLE, 8/20/95, 12 DAYS.  
 2. REFUELING OUTAGE, SCHEDULED FOR 1/26/96, LASTING 27 DAYS.

25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: 09/01/95

26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION):	FORECAST	ACHIEVED
INITIAL CRITICALITY	12/19/84	12/22/84
INITIAL ELECTRICITY	MID APRIL 85	4/13/85
COMMERCIAL OPERATION	1ST QTR 86	2/01/86

## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50 - 352

UNIT NAME LIMERICK UNIT 1

DATE SEPTEMBER 13, 1995

REPORT MONTH AUGUST, 1995

COMPLETED BY PECO ENERGY COMPANY

DAVID R. HENRICKS  
 REPORTS ENGINEER  
 SITE ENGINEERING  
 LIMERICK GENERATING STATION  
 TELEPHONE (610) 718-3772

NO.	DATE	TYPE (1)	DURATION (HOURS)	REASON (2)	METHOD OF SHUTTING DOWN REACTOR (3)	LICENSEE EVENT REPORT #	SYSTEM CODE (4)	COMPONENT CODE (5)	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE	
77	950806	S	000.0	B	4	N/A	HA	VALVEX	REACTOR POWER WAS REDUCED TO 90% FOR MAIN TURBINE VALVE TESTING AND CONTROL ROD EXERCISE TESTING.	4 4 4
78	950808	F	000.0	A	4	N/A	CH	INSTRU	REACTOR POWER WAS REDUCED TO 71% DUE TO REACTOR FEEDWATER PUMP MIN FLOW VALVE FAILED OPEN DUE TO A FAILED POWER SUPPLY	4 4 4
79	950813	S	000.0	B	4	N/A	RB	CONROD	REACTOR POWER WAS REDUCED TO 95% DUE TO CONTROL ROD EXERCISE TESTING.	4 4
80	950820	S	185.6	A	2	N/A	RC	FUELXX	REACTOR WAS SHUTDOWN TO REPLACE A FAILED FUEL BUNDLE.	4 4
81	950828	S	089.1	A	2	1-95-006	CA	PIPEXX	REACTOR WAS SHUTDOWN SHORTLY AFTER BEING CRITICAL DUE TO LEAKAGE INTO THE DRYWELL CAUSED BY A MISALIGNED REACTOR PRESSURE VESSEL INSTRUMENT FLANGE CONNECTION.	4 4 4 4 4
			----- 274.7							

(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  
August 1 through August 31, 1995

I. Narrative Summary of Operating Experiences

Unit 2 began the month of August at a nominal 100% of rated thermal power (RTP).

- On August 1, 2, 3, 4, 5, 12, 14, 16, 17, 1995, power was reduced slightly due to high turbine backpressure as a result of elevated outside air temperature. Power was restored to 100% RTP when turbine backpressure was returned to acceptable values.
- On August 8, 1995, at 1337 hours, an automatic scram occurred due to main turbine stop valve closure following the trip of the main turbine as a result of high reactor pressure vessel water level of 54". The RO observed a signal lockout to the A reactor feedpump. The A and B reactor recirc pumps received automatic runbacks. Following the scram, reactor pressure vessel water level decreased to a minimum of -33". Off-normal procedures were entered and level was restored with the feedwater system aligned in startup level control. The cause of the transient was the result of a failed power supply in the feedwater control system. The power supply was replaced and the Unit was placed in startup on August 9, 1995, at 0626 hours, and the unit went critical at 1604 hours. The Unit entered operational condition 1, Run, at 0636 hours, on August 11, 1995, and the unit was synchronized to the grid at 1105 hours. On August 12, 1995, at 1143 hours, the unit was returned to 100% RTP.
- On August 13, 1995, at 0010 hours, power was reduced to 95% RTP for a control rod pattern adjustment. Power was restored to 100% RTP at 0120 hours.
- On August 14, 1995, at 0017 hours, power was reduced to 90% RTP for a control rod pattern adjustment and main turbine valve exercise testing. Power was restored to 100% RTP at 0628 hours.
- On August 20, 1995, at 1515 hours, turbine bypass valves sporadically opened and closed. Power was reduced, per procedures, and stabilized at 51% RTP. At 1602 hours the bypass valves again opened and the Unit scrammed on high reactor pressure vessel pressure while the reactor mode switch was placed in shutdown. The Unit entered operational condition 4, Cold Shutdown, at 1345 hours on August 21, 1995. The most probable cause of the scram was that a high impedance had developed across a normally closed Electro-Hydraulic Control relay contact that resulted in downstream relays to momentarily de-energize. This resulted in an instantaneous or sustained low turbine control valve demand signal that caused the valves to close. A modification was performed on the relay board. The mode switch was placed in startup at 0202 hours, on August 22, 1995, and the reactor was critical at 1214 hours. The unit entered operational condition 1, Run, at 0104 hours, on August 23, 1995, and the unit was synchronized to the grid at 0310 hours. The unit was returned to 100% RTP at 2300 hours.
- On August 24, 1995, at 0740 hours, power was reduced to 90% RTP for a control rod pattern adjustment. Power was restored to 100% RTP at 1201 hours.

Unit 2 ended this operating period at 100% 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 August.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50 - 353

UNIT LIMERICK UNIT 2

DATE SEPTEMBER 13, 1995

COMPANY PECO ENERGY COMPANY

DAVID R. HENRICKS  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION

TELEPHONE (610) 718-3772

MONTH AUGUST 1995

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	1090	17	1098
2	1074	18	1111
3	1069	19	1115
4	1065	20	724
5	1098	21	0
6	1106	22	0
7	1118	23	488
8	556	24	1090
9	0	25	1114
10	0	26	1106
11	202	27	1103
12	976	28	1106
13	1097	29	1106
14	1085	30	1107
15	1111	31	1102
16	1103		



# OPERATING DATA REPORT

DOCKET NO. 50 - 353

DATE SEPTEMBER 13, 1995

COMPLETED BY PECO ENERGY COMPANY

DAVID R. HENRICKS  
REPORTS ENGINEER  
SITE ENGINEERING  
LIMERICK GENERATING STATION  
TELEPHONE (610) 718-3772

## OPERATING STATUS

1. UNIT NAME: LIMERICK UNIT 2  
2. REPORTING PERIOD: AUGUST, 1995  
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

NOTES: THERE WERE 2 LOAD DROPS  
GREATER THAN 20% THIS MONTH  
DUE TO AUTOMATIC SCRAMS  
CAUSED BY FEED WATER CONTROL  
FAILURE AND EHC CONTROL RELAY  
FAILURE.

8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS NUMBER 3 THROUGH 7) SINCE LAST REPORT, GIVE REASONS:

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

10. REASONS FOR RESTRICTIONS, IF ANY:

	THIS MONTH	YR-TO-DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	744	5,831	49,487
12. NUMBER OF HOURS REACTOR WAS CRITICAL	673.4	5,240.8	44,603.8
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
14. HOURS GENERATOR ON-LINE	614.9	5,069.1	43,674.0
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	2,141,542	16,118,097	138,347,680
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	676,500	5,318,700	45,702,280
18. NET ELECTRICAL ENERGY GENERATED (MWH)	649,583	5,131,644	44,033,844

DATE SEPTEMBER 13, 1995

	THIS MONTH	YR-TO-DATE	CUMULATIVE
19. UNIT SERVICE FACTOR	82.6	86.9	88.3
20. UNIT AVAILABILITY FACTOR	82.6	86.9	88.3
21. UNIT CAPACITY FACTOR (USING MDC NET)	78.3	79.3	83.9
22. UNIT CAPACITY FACTOR (USING DER NET)	78.3	79.3	83.9
23. UNIT FORCED OUTAGE RATE	10.3	2.9	3.4
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):			

25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:

26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION):	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 SEPTEMBER 13, 1995

REPORT MONTH AUGUST, 1995

COMPLETED BY PECO ENERGY COMPANY

DAVID R. HENRICKS  
 REPORTS ENGINEER  
 SITE ENGINEERING  
 LIMERICK GENERATING STATION  
 TELEPHONE (610) 718-3772

NO.	DATE	TYPE (1)	DURATION (HOURS)	REASON (2)	METHOD OF SHUTTING DOWN REACTOR (3)	LICENSEE EVENT REPORT #	SYSTEM CODE (4)	COMPONENT CODE (5)	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE	
67	950808	F	069.5	A	3	2-95-008	CH	INSTRU	REACTOR WAS SHUTDOWN DUE TO A FAILED POWER SUPPLY IN THE FEED WATER CONTROL SYSTEM.	4 4 4
68	950813	S	000.0	B	4	N/A	RB	CONROD	REACTOR POWER WAS REDUCED TO 95% DUE TO CONTROL ROD PATTERN ADJUSTMENT.	4 4
69	950814	S	000.0	B	4	N/A	RB	CONROD	REACTOR POWER WAS REDUCED TO 90% DUE TO CONTROL ROD PATTERN ADJUSTMENT AND MAIN TURBINE VALVE TESTING.	4 4 4
70	950820	F	059.6	A	3	2-95-010	HA	INSTRU	REACTOR WAS SHUTDOWN DUE TO A HIGH IMPED- -ANCE ACROSS THE EHC CONTROL RELAY CONTACT RESULTING IN SPROADIC OPENING AND CLOSING TURBINE BYPASS VALVES.	4 4 4 4
71	950824	S	000.0	B	4	N/A	RB	CONROD	REACTOR POWER WAS REDUCED TO 90% DUE TO CONTROL ROD PATTERN ADJUSTMENT.	4 4 4
			129.1							

(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)

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EXHIBIT I - SAME SOURCE