

3907088730

Docket No. #50-352  
Attachment to Monthly  
Operating Report for  
November 1990

LIMERICK GENERATING STATION  
UNIT 1  
NOVEMBER 1 THROUGH NOVEMBER 30, 1990

I. NARRATIVE SUMMARY OF OPERATING EXPERIENCES

Limerick Unit 1 began the month of November in OPCON 5\* with fuel reloading in progress. Refueling was completed on November 2. Unit 1 entered OPCON 4 on November 11, following the completion of reactor vessel head bolt tensioning. Limerick Unit 1 ended the month of November in OPCON 4 with preparations underway for reactor start-up.

Note: OPCON 5\* equates to fuel movement.

Operational events that occurred during the month of November included:

- On November 10, during instrument valving following instrument line backfilling, an inadvertent division I LOCA signal was generated. All systems responded as designed. The '1A' Core Spray pump started and injected to the vessel for approximately one minute, resulting in a level increase of 8", and the D11 diesel-generator started and ran unloaded for 5 minutes prior to being secured. In addition, Shutdown Cooling was out of service for approximately 15 minutes due to load shedding of the '1A' DHR Service Water pump. There was no appreciable vessel temperature increase during this period. The cause of this event was determined to be an error in the valving sequence as prescribed by the procedure. A four hour notification was made due to an ESF actuation.
- On November 18, a PPS actuation occurred due to a high reactor vessel pressure signal during hydrostatic testing due to a personnel error related to reactor vessel pressure control. There was no adverse effect on the coolant pressure boundary as a result of this event and vessel temperature and pressure were maintained within Technical Specification limits. A four hour notification was made pursuant to 10CFR 50.72.
- On November 20, the Unit 1 Reactor Protection System (RPS) initiated a full reactor SCRAM signal due to the Intermediate Range Monitors (IRMs) going upscale. The SCRAM occurred when the '1F' IRM spiked upscale causing a Channel 'B' half SCRAM. At the time of the 'B' half SCRAM, a channel 'A' half SCRAM was present due to I&C surveillance testing of the '1C' IRM. An NRC four hour notification was made to report the ESF actuation.
- On November 28, a 4 hour notification was made to the NRC when a manual Chlorine Isolation was initiated per procedure when the 'B' Toxic Gas Analyzer triggered a "High Toxic Gas Concentration" alarm. The analyzer was proven to be inoperable and the Chlorine Isolation Signal was reset.

II. CHALLENGES TO THE MAIN STEAM SAFETY RELIEF VALVES

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

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50 - 352  
UNIT LIMERICK UNIT 1  
DATE DECEMBER 5, 1990  
COMPANY PHILADELPHIA ELECTRIC COMPANY  
KARL MECK  
REPORTS SUPERVISOR  
BUSINESS UNIT  
LIMERICK GENERATING STATION  
TELEPHONE (215) 327-1200 EXTENSION 3320

MONTH NOVEMBER 1990

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	0	24	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0		
16	0		

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OPERATING DATA REPORT

DOCKET NO. 50 - 352  
 DATE DECEMBER 5, 1990  
 COMPLETED BY PHILADELPHIA ELECTRIC COMPANY  
 KARL MECK  
 REPORTS SUPERVISOR  
 BUSINESS UNIT  
 LIMERICK GENERATING STATION  
 TELEPHONE (215) 327-1200 EXTENSION 3320

OPERATING STATUS

- 1. UNIT NAME: LIMERICK UNIT 1
- 2. REPORTING PERIOD: NOVEMBER, 1990
- 3. LICENSED THERMAL POWER (MWT): 3293
- 4. NAMEPLA RATING (GROSS MWE): 1138
- 5. DESIGN ELECTRICAL RATING (NET MWE): 1055
- 6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1092
- 7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1055

NOTES: 3RD REFUEL OUTAGE FOR ENTIRE PERIOD.

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:

- 11. HOURS IN REPORTING PERIOD
- 12. NUMBER OF HOURS REACTOR WAS CRITICAL
- 13. REACTOR RESERVE SHUTDOWN HOURS
- 14. HOURS GENERATOR ON-LINE
- 15. UNIT RESERVE SHUTDOWN HOURS
- 16. GROSS THERMAL ENERGY GENERATED (MWH)
- 17. GROSS ELECTRICAL ENERGY GENERATED (MWH)
- 18. NET ELECTRICAL ENERGY GENERATED (MWH)

THIS MONTH	YR-TO-DATE	CUMULATIVE
720	2,016	42,336
0	5,510.2	32,639.0
0.0	0.0	0.0
0.0	5,373.8	32,045.4
0.0	0.0	0.0
0	17,270.678	95,134.13
0	5,555.990	30,742.560
* -5,173	5,333,738	29,390,134

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DATE DECEMBER 5, 1990

	THIS MONTH	YR-TO-DATE	CUMULATIVE
19. UNIT SERVICE FACTOR	0.0	67.0	70.7
20. UNIT AVAILABILITY FACTOR	0.0	67.0	75.7
21. UNIT CAPACITY FACTOR (USING MDC NET)	0.0	63.1	65.8
22. UNIT CAPACITY FACTOR (USING DER NET)	0.0	63.1	65.8
23. UNIT FORCED OUTAGE RATE	0.0	3.6	3.0

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):  
 REFUELING OUTAGE; SEPTEMBER 07, 1990; DAY 84

25. IF SHUTDOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: 12/08/90

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

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UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50 - 352

UNIT NAME LIMERICK UNIT 1

DATE DECEMBER 5, 1990

COMPLETED BY PHILADELPHIA ELECTRIC COMPANY

KARL MECK

REPORTS SUPERVISOR

BUSINESS UNIT

LIMERICK GENERATING STATION

TELEPHONE (215) 327-1200 EXTENSION 3320

REPORT MONTH NOVEMBER, 1990

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
35	901101	S	720.0	C	2	N/A	ZZ	ZZZZZZ	UNIT IN REFUELING OUTAGE FOR ENTIRE PERIOD.

(1)

- F - FORCED
- S - SCHEDULED

(2)

- 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  
NOVEMBER 1 THROUGH NOVEMBER 30, 1990

I. NARRATIVE SUMMARY OF OPERATING EXPERIENCES

Limerick Unit 2 began the month at a nominal 100% of rated thermal power. On November 2, reactor power was reduced to 86% to perform a Control Rod pattern adjustment, a Main Turbine Control Valve test and a Reactor Protection System test. On November 4, reactor power was reduced to 98% to perform a Control Rod exercise test. On November 14, the turbine-generator was taken off-line with reactor power reduced to 18% and steam flow bypassed to the condenser, following the discovery of an EHC leak at the #4 Main Turbine Control Valve. On November 16, reactor power was increased and the generator synchronized to the grid at 2130 hours. On November 18, Unit 2 achieved 100% power and reduced reactor power to 85% to perform a Control Rod pattern adjustment. Reactor power was again reduced to approximately 92% later in the day on November 18 and a Control Rod pattern adjustment made to improve thermal limits. On November 28, reactor power was again reduced to 85% to perform a Control Rod pattern adjustment. Limerick Unit 2 ended the month at 100% of rated thermal power.

II. CHALLENGES TO MAIN STEAM SAFETY RELIEF VALVES

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

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50 - 353  
UNIT LIMERICK UNIT 2  
DATE DECEMBER 5, 1990  
COMPANY PHILADELPHIA ELECTRIC COMPANY  
KARL MECK  
REPORTS SUPERVISOR  
BUSINESS UNIT  
LIMERICK GENERATING STATION  
TELEPHONE (215) 327-1200 EXTENSION 3320

MONTH: NOVEMBER 1990

DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)	DAY	AVERAGE DAILY POWER LEVEL (MWE-NET)
1	1036	17	662
2	1044	18	1045
3	1047	19	1034
4	1045	20	1043
5	1042	21	1051
6	1064	22	1051
7	1056	23	1006
8	1038	24	1090
9	1054	25	1044
10	1050	26	1046
11	1056	27	1041
12	1089	28	1015
13	1008	29	1053
14	963	30	1043
15	0		
16	4		

DOCKET NO. 50 - 353  
 DATE DECEMBER 5, 1990  
 COMPLETED BY PHILADELPHIA ELECTRIC COMPANY  
 KARL MECK  
 REPORTS SUPERVISOR  
 BUSINESS UNIT  
 LIMERICK GENERATING STATION  
 TELEPHONE (215) 327-1200 EXTENSION 3320

OPERATING STATUS

1. UNIT NAME: 1000 K UNIT 2
2. REPORTING PERIOD: NOVEMBER, 1990
3. LICENSED THERMAL POWER (MWT): 93
4. NAMEPLATE RATING (GROSS MWE): 1138
5. DESIGN ELECTRICAL RATING (NET MWE): 1055
6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWE): 1092
7. MAXIMUM DEPENDABLE CAPACITY (NET MWE): 1055

NOTES: THE MAIN TURBINE GENERATOR WAS

TRIPPED DUE TO AN EHC LEAK.

8. IF CHANGES OCCUR IN CAPACITY RATINGS (ITEMS NUMBER 3 THROUGH

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	720	7,848	7,848
12. NUMBER OF HOURS REACTOR WAS CRITICAL	720.0	6,815.3	6,815.3
13. REACTOR RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
14. HOURS GENERATOR ON-LINE	673.3	6,480.0	6,480.0
15. UNIT RESERVE SHUTDOWN HOURS	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED (MWH)	2,200,754	20,671,707	20,671,707
17. GROSS ELECTRICAL ENERGY GENERATED (MWH)	718,160	6,808,296	6,808,296
18. NET ELECTRICAL ENERGY GENERATED (MWH)	691,285	6,545,437	6,545,437



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	THIS MONTH	YR-TO-DATE	CUMULATIVE
19. UNIT SERVICE FACTOR	93.5	82.6	82.6
20. UNIT AVAILABILITY FACTOR	93.5	82.6	82.6
21. UNIT CAPACITY FACTOR (USING MDC NET)	91.0	79.1	79.1
22. UNIT CAPACITY FACTOR (LOADING DER NET)	91.0	79.1	79.1
23. UNIT FORCED OUTAGE RATE	6.5	10.9	10.9

DATE DECEMBER 5, 1990

24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):  
 REFUELING OUTAGE; MARCH 22, 1991; 75 DAYS

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

26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION):

FORECAST	ACHIEVED
08/12/89	08/12/89
09/01/89	09/01/89
01/1/90	01/08/90

INITIAL CRITICALITY

INITIAL ELECTRICITY

COMMERCIAL OPERATION

3907088730

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50 - 353

UNIT NAME LIMERICK UNIT 2

DATE DECEMBER 5, 1990

COMPLETED BY PHILADELPHIA ELECTRIC COMPANY

REPORT MONTH NOVEMBER, 1990

KARL MECK  
 REPORTS SUPERVISOR  
 BUSINESS UNIT  
 LIMERICK GENERATING STATION  
 TELEPHONE (215) 327-1200 EXTENSION 3320

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
32	901102	S	000.0	B	4	N/A	ZZ	ZZZZZZ	LOAD WAS REDUCED 15% TO PERFORM MAIN TURBINE CONTROL VALVE TESTING AND A CONTROL ROD PATTERN ADJUSTMENT.
33	901104	S	000.0	F	4	N/A	ZZ	ZZZZZZ	LOAD WAS REDUCED 2% TO PERFORM CONTROL ROD EXERCISE TEST.
34	901114	F	046.7	A	4	N/A	HA	PIPEXX	LOAD WAS REDUCED 8% AND THE MAIN TURBINE GENERATOR TRIPPED TO REPAIR AN EHC PIPING LEAK.
35	901118	S	000.0	F	4	N/A	ZZ	ZZZZZZ	LOAD WAS REDUCED 15% TO PERFORM A CONTROL ROD PATTERN ADJUSTMENT.
36	901118	S	000.0	F	4	N/A	ZZ	ZZZZZZ	LOAD WAS REDUCED 10% TO PERFORM A CONTROL ROD PATTERN ADJUSTMENT.
37	901128	S	000.0	F	4	N/A	ZZ	ZZZZZZ	LOAD WAS REDUCED 15% TO PERFORM A CONTROL ROD PATTERN ADJUSTMENT.

(1)

- F - FORCED
- S - SCHEDULED

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

(5)

EXHIBIT 1 - SAME SOURCE

46.7