



Commonwealth Edison

Quad Cities Nuclear Power Station
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AMS-94-12

May 2, 1994

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

SUBJECT: Quad Cities Nuclear Station Units 1 and 2
Monthly Performance Report
NRC Docket Nos. 50-254 and 50-265

Enclosed for your information is the Monthly Performance Report covering the operation of Quad-Cities Nuclear Power Station, Units One and Two, during the month of April 1994.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

Anthony M. Scott
System Engineering Supervisor

AMS/dak

Enclosure

cc: J. Martin, Regional Administrator
T. Taylor, Senior Resident Inspector

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QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

April 1994

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 AND 50-265

LICENSE NOS. DPR-29 AND DPR-30

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I. INTRODUCTION

Quad-Cities Nuclear Power Station is composed of two Boiling Water Reactors, each with a Maximum Dependable Capacity of 769 MWe Net, located in Cordova, Illinois. The Station is jointly owned by Commonwealth Edison Company and Iowa-Illinois Gas & Electric Company. The Nuclear Steam Supply Systems are General Electric Company Boiling Water Reactors. The Architect/Engineer was Sargent & Lundy, Incorporated, and the primary construction contractor was United Engineers & Constructors. The Mississippi River is the condenser cooling water source. The plant is subject to license numbers DPR-29 and DPR-30, issued October 1, 1971, and March 21, 1972, respectively; pursuant to Docket Numbers 50-254 and 50-265. The date of initial Reactor criticalities for Units One and Two, respectively were October 18, 1971, and April 26, 1972. Commercial generation of power began on February 18, 1973 for Unit One and March 10, 1973 for unit Two.

This report was compiled by Matt Benson and Debra Kelley, telephone number 309-654-2241, extensions 2995 and 2240.

II. SUMMARY OF OPERATING EXPERIENCE

A. Unit One

Quad Cities Unit One spent the entire month of April 1994 shutdown in Refuel Outage Q1R13. The scheduled startup for Unit One is July 4, 1994.

B. Unit Two

Quad Cities Unit Two began the month of April 1994 at full capable load and remained on line through out the month.

On April 22, Unit 2 dropped load to 700 MWe for turbine stop valve testing. Main transformer trouble was indicated on April 23 when the oil temperature rose due to cooling fans tripping off. Load was reduced to 200 MWe while operating searched for the cause. A shorted relay was repaired and full capable load was restored.

Numerous other load drops were performed for administrative reasons but none caused the average daily unit power level to drop by 20% or greater.

III. PLANT OR PROCEDURE CHANGES, TESTS, EXPERIMENTS,
AND SAFETY RELATED MAINTENANCE

A. Amendments to Facility License or Technical Specifications

Technical Specification Amendment No. 144 was issued on March 08, 1994 to Facility Operating License DPR-29 and Amendment No. 140 to Facility Operating License DPR-30 for Quad Cities Nuclear Power Station.

The amendments delete the requirements for demonstrating the operability of redundant equipment when emergency core cooling system equipment is found to be inoperable, or made inoperable for maintenance. The changes are consistent with the guidance provided by the NRC staff in Generic Letter 93-05, dated September 27, 1993.

B. Facility or Procedure Changes Requiring NRC Approval

There were no Facility or Procedure changes requiring NRC approval for the reporting period.

C. Tests and Experiments Requiring NRC Approval

There were no Tests or Experiments requiring NRC approval for the reporting period.

D. Corrective Maintenance of Safety Related Equipment

The following represents a tabular summary of the major safety related maintenance performed on Units One and Two during the reporting period. This summary includes the following: Work Request Numbers, System Component Description and work performed.

UNIT 1 & 1/2 MAINTENANCE SUMMARY

NWR#	SYSTEM	EPN#	WORK REQUESTED	WORK PERFORMED
Q02759	901-3	1-0901-3	Repair/replace broken fuse holder in 901-3 panel.	Replaced terminal block.
Q02800	901-8	1-0901-8	Repair/replace terminal blocks in 901-8 panel.	Replaced 3 terminal blocks.
Q04582	901-32	1-0901-32 -33 -39 -47 1-6705-2	Replace various cracked HFA relay covers.	Replaced 11 cracked covers.
Q10065	0263	1-0263	Troubleshoot/repair ATWS topaz inverter malfunction.	Cleaned dust buildup on the west inverter filter.
Q11570	1300	1-1360-9A, B,C,D	Repair test taps on RCIC main steam pressure switches.	Replaced test taps on all four switches.
Q12669	1000	1-1001-70B	Repair/replace 1B RHR pump suction pressure gauge due to failed calibration test.	Installed new pressure indicator.
Q13755	6600	1-6600-1	Repair/replace diesel generator cylinder temperature indicator.	Installed new temperature indicator.
Q14250	6700	1-6706-2	Repair sticking door which caused a relay to pick up and lock out the 1B core spray pump.	Lubricated door handle latching mechanism.

NWR#	SYSTEM	EPN#	WORK REQUESTED	WORK PERFORMED
Q14523	0010	1/2-0010	Repair/certify miscellaneous instruments.	Found one instrument out of calibration. Calibrated instrument.
Q15554	1300	1-1301-17	Replace severely cracked cable on main steam to RCIC downstream stop valve limitorque.	Replaced cable.
Q15585	6700	1-6705-3	Install missing jumper on 1A core spray pump breaker.	Installed jumper.
Q15947	7200	1-7200-6C	Repair/replace feed to MCC 19-4 breaker. Breaker did not trip correctly.	Replaced breaker programmer.
Q94060	2400	1-2406A	Repair H2O2 continuous air monitor recorder.	Adjusted potentiometers, cleaned slidewire and slidebar, lubricated bearings and recalibrated the blue pen.

UNIT 2 MAINTENANCE SUMMARY

NWR#	SYSTEM	EPN#	WORK REQUESTED	WORK PERFORMED
Q09063	0300	2-0305-126	Adjust limit switches for various scram inlet valves.	Realigned adjusting rods.
Q10214	8350	2-8350	Replace sheared bolts on 250VDC ground recorder.	Installed new bolts.
Q12655	2500	2-2501	Investigate/repair ACAD air compressor failing to shut off at 50 psig.	Recalibrated PS 2-2540-20 and PS 2-2540-21 to new setpoint per setpoint change 940061.
Q14193	0300	2-0305-126-2639	Investigate/repair scram inlet valve. Rod stuck past 00.	Adjusted scram outlet valve limit switch. Changed length of stem by 1/32".
Q15316	1000	2-1053-H	Replace test tap on 2C RHR pump discharge pressure switch.	Replaced test tap.
Q15474	0756	2-0756-6	Troubleshoot/repair APRM #6 Hi-Hi 1/2 scram.	Cleaned edge connectors on all cards and modules. Ran I/V curves on LPRM's for APRM #6. Performed QIS 3.2.
Q15559	0020	2-0020B-RHR	Repair broken latch on 2B RHR room watertight door.	Installed door latch and lubricated door.

NWR#	SYSTEM	EPN#	WORK REQUESTED	WORK PERFORMED
Q15993	0020	2-0020-176	Repair broken window on 3rd floor reactor building interlock door.	Installed new window and sealed with silicone.

IV. LICENSEE EVENT REPORTS

The following is a tabular summary of all licensee event reports for Quad-Cities Units One and Two occurring during the reporting period, pursuant to the reportable occurrence reporting requirements as set forth in sections 6.6.B.1 and 6.6.B.2 of the Technical Specifications.

UNIT 1

<u>Licensee Event Report Number</u>	<u>Date</u>	<u>Title of occurrence</u>
-------------------------------------	-------------	----------------------------

There were no Licensee Event Reports for Unit 1 for this reporting period.

UNIT 2

<u>Licensee Event Report Number</u>	<u>Date</u>	<u>Title of occurrence</u>
94-07	4-8-94	2B RHR Room Cooler INOP with 1/2 DG INOP.
94-08	4-17-94	Recirc Sample Valves 220-44 & 45 failed to close.

V. DATA TABULATIONS

The following data tabulations are presented in this report:

- A. Operating Data Report
- B. Average Daily Unit Power Level
- C. Unit Shutdowns and Power Reductions

APPENDIX C

OPERATING DATA REPORT

DOCKET NO. 50-254

UNIT One

DATE May 2, 1994

COMPLETED BY Matt Benson

TELEPHONE (309) 654-2241

OPERATING STATUS

0000 040194

1. REPORTING PERIOD: 2400 043094 GROSS HOURS IN REPORTING PERIOD: 719

2. CURRENTLY AUTHORIZED POWER LEVEL (Mw): 2511 MAX > DEPEND > CAPACITY: 769
DESIGN ELECTRICAL RATING (MWe-NET): 789

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY) (MWe-Net): N/A

4. REASONS FOR RESTRICTION (IF ANY):

	THIS MONTH	YR TO DATE	CUMULATIVE
5. NUMBER OF HOURS REACTOR WAS CRITICAL	0.00	1706.00	151487.30
6. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	3421.90
7. HOURS GENERATOR ON LINE	0.00	1682.90	146979.20
8. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	909.20
9. GROSS THERMAL ENERGY GENERATED (MWH)	0.00	3865794.10	317558981.30
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	0.00	1265145.00	102963264.00
11. NET ELECTRICAL ENERGY GENERATED (MWH)	0.00	1206708.00	97124706.00
12. REACTOR SERVICE FACTOR	0.00	59.26	78.37
13. REACTOR AVAILABILITY FACTOR	0.00	59.26	80.14
14. UNIT SERVICE FACTOR	0.00	58.45	76.04
15. UNIT AVAILABILITY FACTOR	0.00	58.45	76.51
16. UNIT CAPACITY FACTOR (Using MDC)	0.00	54.50	65.34
17. UNIT CAPACITY FACTOR (Using Design MWe)	0.00	53.12	63.68
18. UNIT FORCED OUTAGE RATE	0.00	1.33	6.25

19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):

20. IF SHUTDOWN AT END OF REPORT PERIOD < ESTIMATED DATE OF STARTUP: 7-4-94

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

	FORECAST	ACHIEVED	
INITIAL CRITICALITY			
INITIAL ELECTRICITY			
COMMERCIAL OPERATION			

APPENDIX C

OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT Two

DATE May 2, 1994

COMPLETED BY Matt Benson

TELEPHONE (309) 654-2241

OPERATING STATUS

0000 040194

1. REPORTING PERIOD: 2400 043094 GROSS HOURS IN REPORTING PERIOD: 719

2. CURRENTLY AUTHORIZED POWER LEVEL (MW): 2511 MAX > DEPEND > CAPACITY: 769
DESIGN ELECTRICAL RATING (MWe-NET): 789

3. POWER LEVEL TO WHICH RESTRICTED (IF ANY) (MWe-Net): N/A

4. REASONS FOR RESTRICTION (IF ANY):

	THIS MONTH	YR TO DATE	CUMULATIVE
5. NUMBER OF HOURS REACTOR WAS CRITICAL	719.00	2294.40	146195.45
6. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	2985.80
7. HOURS GENERATOR ON LINE	719.00	2266.20	142449.35
8. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	702.90
9. GROSS THERMAL ENERGY GENERATED (MWH)	1718756.00	5302544.90	308083506.80
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	558207.00	1723136.00	99032906.00
11. NET ELECTRICAL ENERGY GENERATED (MWH)	538676.00	1650215.00	93792775.00
12. REACTOR SERVICE FACTOR	100.00	79.69	76.25
13. REACTOR AVAILABILITY FACTOR	100.00	79.69	77.81
14. UNIT SERVICE FACTOR	100.00	78.71	74.30
15. UNIT AVAILABILITY FACTOR	100.00	78.71	74.66
16. UNIT CAPACITY FACTOR (Using MDC)	97.43	74.54	63.61
17. UNIT CAPACITY FACTOR (Using Design MWe)	94.96	72.65	62.00
18. UNIT FORCED OUTAGE RATE	0.00	21.29	8.77

19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH):

20. IF SHUTDOWN AT END OF REPORT PERIOD < ESTIMATED DATE OF STARTUP:

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

	FORECAST	ACHIEVED	
INITIAL CRITICALITY			
INITIAL ELECTRICITY			
COMMERCIAL OPERATION			

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO 50-254
UNIT One
DATE May 2, 1994
COMPLETED BY Matt Benson
TELEPHONE (309) 654-2241

MONTH April 1994

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1.	<u> - 8 </u>
2.	<u> - 8 </u>
3.	<u> - 8 </u>
4.	<u> - 8 </u>
5.	<u> - 8 </u>
6.	<u> - 8 </u>
7.	<u> - 8 </u>
8.	<u> - 8 </u>
9.	<u> - 8 </u>
10.	<u> - 8 </u>
11.	<u> - 8 </u>
12.	<u> - 8 </u>
13.	<u> - 7 </u>
14.	<u> - 7 </u>
15.	<u> - 8 </u>
16.	<u> - 7 </u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17.	<u> - 7 </u>
18.	<u> - 7 </u>
19.	<u> - 7 </u>
20.	<u> - 8 </u>
21.	<u> - 8 </u>
22.	<u> - 8 </u>
23.	<u> - 8 </u>
24.	<u> - 8 </u>
25.	<u> - 8 </u>
26.	<u> - 8 </u>
27.	<u> - 7 </u>
28.	<u> - 7 </u>
29.	<u> - 8 </u>
30.	<u> - 7 </u>
31.	<u> </u>

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt. These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO 50-265
UNIT Two
DATE May 2, 1994
COMPLETED BY Matt Benson
TELEPHONE (309) 654-2241

MONTH April 1994

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1.	<u>761</u>
2.	<u>759</u>
3.	<u>760</u>
4.	<u>759</u>
5.	<u>761</u>
6.	<u>761</u>
7.	<u>761</u>
8.	<u>759</u>
9.	<u>760</u>
10.	<u>762</u>
11.	<u>761</u>
12.	<u>762</u>
13.	<u>762</u>
14.	<u>762</u>
15.	<u>762</u>
16.	<u>751</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17.	<u>765</u>
18.	<u>763</u>
19.	<u>763</u>
20.	<u>762</u>
21.	<u>764</u>
22.	<u>759</u>
23.	<u>654</u>
24.	<u>605</u>
25.	<u>760</u>
26.	<u>754</u>
27.	<u>672</u>
28.	<u>750</u>
29.	<u>763</u>
30.	<u>765</u>
31.	<u></u>

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt. These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-254

UNIT NAME One

COMPLETED BY Matt Benson

DATE May 6, 1994

REPORT MONTH April, 1994

TELEPHONE 309-654-2241

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
94-04	4-01-94	S	719.0	C	4	-----	---	----	Continued Refuel Outage Q1R13

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-265

UNIT NAME Two

COMPLETED BY Matt Benson

DATE May 6, 1994

REPORT MONTH April 1994

TELEPHONE 309-654-2241

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
94-03	4-22-94	S	6.0	B	5	-----	---	----	Stop Valve Testing.
94-04	4-23-94	F	7.5	A	5	-----	---	----	Load Drop for Loss of Main Transformer Cooling.

VI. UNIQUE REPORTING REQUIREMENTS

The following items are included in this report based on prior commitments to the commission:

A. Main Steam Relief Valve Operations

There were no Main Steam Relief Valve Operations for the reporting period.

B. Control Rod Drive Scram Timing Data for Units One and Two

There was no Control Rod Drive scram timing data for Units One and Two for the reporting period.

VII. REFUELING INFORMATION

The following information about future reloads at Quad-Cities Station was requested in a January 26, 1978, licensing memorandum (78-24) from D. E. O'Brien to C. Reed, et al., titled "Dresden, Quad-Cities and Zion Station--NRC Request for Refueling Information", dated January 18, 1978.

QUAD CITIES REFUELING
INFORMATION REQUEST

1. Unit: Q1 Reload: 12 Cycle: 13
2. Scheduled date for next refueling shutdown: 3-13-94
3. Scheduled date for restart following refueling: 7-2-94
4. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment:
YES. Safety Limit MCPR to be changed from 1.06 to 1.07 due to GE10 Fuel.
5. Scheduled date(s) for submitting proposed licensing action and supporting information:
11-19-93
6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:
144 GE10 Fuel Bundles will be loaded during Q1R13.
7. The number of fuel assemblies.
- a. Number of assemblies in core: 0
- b. Number of assemblies in spent fuel pool: 2441
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned in number of fuel assemblies:
- a. Licensed storage capacity for spent fuel: 3657
- b. Planned increase in licensed storage: 0
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: 2006

QUAD CITIES REFUELING
INFORMATION REQUEST

1. Unit: Q2 Reload: 12 Cycle: 13
2. Scheduled date for next refueling shutdown: 1-29-95
3. Scheduled date for restart following refueling: 4-9-95
4. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment:
YES - Safety limit MCPR to be changed from 1.06 to 1.07 due to GE10 Fuel.
5. Scheduled date(s) for submitting proposed licensing action and supporting information:
7-28-94
6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:
144 GE10 fuel bundles will be loaded during Q2R13.
7. The number of fuel assemblies.
 - a. Number of assemblies in core: 724
 - b. Number of assemblies in spent fuel pool: 2583
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned in number of fuel assemblies:
 - a. Licensed storage capacity for spent fuel: 3897
 - b. Planned increase in licensed storage: 0
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: 2006

VIII. GLOSSARY

The following abbreviations which may have been used in the Monthly Report, are defined below:

ACAD/CAM	- Atmospheric Containment Atmospheric Dilution/Containment Atmospheric Monitoring
ANSI	- American National Standards Institute
APRM	- Average Power Range Monitor
ATWS	- Anticipated Transient Without Scram
BWR	- Boiling Water Reactor
CRD	- Control Rod Drive
EHC	- Electro-Hydraulic Control System
EOF	- Emergency Operations Facility
GSEP	- Generating Stations Emergency Plan
HEPA	- High-Efficiency Particulate Filter
HPCI	- High Pressure Coolant Injection System
HRSS	- High Radiation Sampling System
IPCLRT	- Integrated Primary Containment Leak Rate Test
IRM	- Intermediate Range Monitor
ISI	- Inservice Inspection
LER	- Licensee Event Report
LLRT	- Local Leak Rate Test
LPCI	- Low Pressure Coolant Injection Mode of RHRS
LPRM	- Local Power Range Monitor
MAPLHGR	- Maximum Average Planar Linear Heat Generation Rate
MCPR	- Minimum Critical Power Ratio
MFLCPR	- Maximum Fraction Limiting Critical Power Ratio
MPC	- Maximum Permissible Concentration
MSIV	- Main Steam Isolation Valve
NIOSH	- National Institute for Occupational Safety and Health
PCI	- Primary Containment Isolation
PCIOMR	- Preconditioning Interim Operating Management Recommendations
RBCCW	- Reactor Building Closed Cooling Water System
RBM	- Rod Block Monitor
RCIC	- Reactor Core Isolation Cooling System
RHRS	- Residual Heat Removal System
RPS	- Reactor Protection System
RWM	- Rod Worth Minimizer
SBGTS	- Standby Gas Treatment System
SBLC	- Standby Liquid Control
SDC	- Shutdown Cooling Mode of RHRS
SDV	- Scram Discharge Volume
SRM	- Source Range Monitor
TBCCW	- Turbine Building Closed Cooling Water System
TIP	- Traversing Incore Probe
TSC	- Technical Support Center