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Quad Cities Generating Station  
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**ComEd**

LWP-95-102

November 8, 1995

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 October 1995.

Respectfully,

ComEd  
Quad-Cities Nuclear Power Station

*L. W. Pearce*

L. W. Pearce  
Station Manager

LWP/dak

Enclosure

cc: H. Miller, Regional Administrator  
C. Miller, Senior Resident Inspector

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A Unicom Company

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QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

September 1995

COMMONWEALTH EDISON COMPANY

AND

MID-AMERICAN ENERGY 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 Mid-American Energy 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 Kristal Moore and Debra Kelley, telephone number 309-654-2241, extensions 3070 and 2240.

## II. SUMMARY OF OPERATING EXPERIENCE

### A. Unit One

Quad Cities Unit One started the month of October 1995 at full power. A manual scram was performed on October 22, 1995 at 0026 hours. The unit had been on line for 283 days. The scram was inserted during a controlled shutdown, due to a design issue with the Scram Discharge Volume Level Switch not meeting single failure criteria. A temporary alteration is being installed and will remain in-place until the permanent modification can be installed during Q1R14 (February, 1996). Start-up is projected for November 8, 1995.

### B. Unit Two

Quad Cities Unit Two started the month of October 1995 on-line at 700 MWe. On October 4, 1995 a load drop was commenced for the Recirc Flow Drop Test. After completion of test, the load drop was reduced further to troubleshoot a problem with the #2 Turbine Control Valve. On October 21, 1995 at 1805 hours the Turbine was tripped due to a leak on #1 Turbine Control Valve. At 2158 hours the reactor was manually scrammed during a controlled shutdown, due to the same design issue that necessitated the shutdown of Unit 1. The permanent modification for Unit 2 is being planned. Start-up is projected for November 17, 1995.

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

A. Amendments to Facility License or Technical Specifications

Technical Specification Amendment No. 163 was issued on October 20, 1995 to Facility Operating License DPR-29 and Amendment No. 159 to Facility Operating License DPR-30 for Quad Cities Nuclear Power Station. The amendments would relocate the requirements for the "Review, Investigative and Audit Functions" and frequencies of the Quality Assurance (QA) program from the administrative controls section of the TS to the appropriate sections of the licensee's Quality Assurance Topical Report (QATR), CE-1-A, Revision 65. In addition, the proposed TS changes include title changes to reflect the reorganization of the licensee's Nuclear Operations Division and miscellaneous administrative and editorial changes.

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.

#### 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>
95-007	10/20/95	SDV Logic Circuitry

##### UNIT 2

<u>Licensee Event Report Number</u>	<u>Date</u>	<u>Title of occurrence</u>
95-006	10/04/95	29-2 Breaker Trip
95-007	10/04/95	HPCI Turning Gear INOP
95-008	10/18/95	U2 HPCI Flow Oscillations

## 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 November 8, 1995  
 COMPLETED BY Kristal Moore  
 TELEPHONE (309) 654-2241

OPERATING STATUS

0000 100195  
 1. REPORTING PERIOD: 2400 103195 GROSS HOURS IN REPORTING PERIOD: 745

2. CURRENTLY AUTHORIZED POWER LEVEL (MWT): 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	504.50	6824.30	159256.80
6. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	3421.90
7. HOURS GENERATOR ON LINE	504.50	6768.50	154592.40
8. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	909.20
9. GROSS THERMAL ENERGY GENERATED (MWH)	1253328.80	16432164.90	335588288.30
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	403221.00	5243915.00	108707769.00
11. NET ELECTRICAL ENERGY GENERATED (MWH)	383182.00	5021058.00	102609224.00
12. REACTOR SERVICE FACTOR	67.72	93.53	77.13
13. REACTOR AVAILABILITY FACTOR	67.72	93.53	78.79
14. UNIT SERVICE FACTOR	67.72	92.77	74.87
15. UNIT AVAILABILITY FACTOR	67.72	92.77	75.31
16. UNIT CAPACITY FACTOR (Using MDC)	66.88	89.49	64.63
17. UNIT CAPACITY FACTOR (Using Design MWe)	65.19	87.22	62.99
18. UNIT FORCED OUTAGE RATE	32.28	7.23	7.48

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 C

OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT Two

DATE October 8, 1995

COMPLETED BY Kristal Moore

TELEPHONE (309) 654-2241

OPERATING STATUS

0000 100195

1. REPORTING PERIOD: 2400 103195 GROSS HOURS IN REPORTING PERIOD: 745

2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 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	502.00	3161.80	152937.65
6. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	2985.80
7. HOURS GENERATOR ON LINE	498.10	3064.80	148996.45
8. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	702.90
9. GROSS THERMAL ENERGY GENERATED (MWh)	1059064.20	6256168.12	322196872.22
10. GROSS ELECTRICAL ENERGY GENERATED (MWh)	336538.00	1948558.00	103462459.00
11. NET ELECTRICAL ENERGY GENERATED (MWh)	318808.00	1847243.00	98003152.00
12. REACTOR SERVICE FACTOR	67.38	43.34	74.64
13. REACTOR AVAILABILITY FACTOR	67.38	43.34	76.09
14. UNIT SERVICE FACTOR	66.86	42.01	72.71
15. UNIT AVAILABILITY FACTOR	66.86	42.01	73.06
16. UNIT CAPACITY FACTOR (Using MDC)	55.65	32.92	62.19
17. UNIT CAPACITY FACTOR (Using Design MWe)	54.24	32.09	60.62
18. UNIT FORCED OUTAGE RATE	33.14	15.70	10.06

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 November 8, 1995  
COMPLETED BY Kristal Moore  
TELEPHONE (309) 654-2241

MONTH October 1995

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1.	<u>770</u>
2.	<u>770</u>
3.	<u>768</u>
4.	<u>768</u>
5.	<u>768</u>
6.	<u>768</u>
7.	<u>704</u>
8.	<u>770</u>
9.	<u>770</u>
10.	<u>768</u>
11.	<u>770</u>
12.	<u>771</u>
13.	<u>768</u>
14.	<u>773</u>
15.	<u>761</u>
16.	<u>772</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17.	<u>770</u>
18.	<u>769</u>
19.	<u>771</u>
20.	<u>772</u>
21.	<u>733</u>
22.	<u>-11</u>
23.	<u>-10</u>
24.	<u>-10</u>
25.	<u>- 9</u>
26.	<u>- 9</u>
27.	<u>- 9</u>
28.	<u>- 9</u>
29.	<u>- 9</u>
30.	<u>- 8</u>
31.	<u>- 8</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.

1.16-8

APPENDIX B  
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO 50-265  
UNIT Two  
DATE November 8, 1995  
COMPLETED BY Kristal Moore  
TELEPHONE (309) 654-2241

MONTH October 1995

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1.	<u>669</u>
2.	<u>665</u>
3.	<u>667</u>
4.	<u>586</u>
5.	<u>411</u>
6.	<u>658</u>
7.	<u>662</u>
8.	<u>660</u>
9.	<u>663</u>
10.	<u>661</u>
11.	<u>656</u>
12.	<u>662</u>
13.	<u>661</u>
14.	<u>662</u>
15.	<u>662</u>
16.	<u>661</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17.	<u>660</u>
18.	<u>660</u>
19.	<u>661</u>
20.	<u>663</u>
21.	<u>455</u>
22.	<u>-10</u>
23.	<u>-10</u>
24.	<u>- 9</u>
25.	<u>- 8</u>
26.	<u>- 9</u>
27.	<u>- 8</u>
28.	<u>- 8</u>
29.	<u>- 8</u>
30.	<u>- 8</u>
31.	<u>- 8</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.







## 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

Relief valve operations during the reporting period are summarized in the following table. The table includes information as to which relief valve was actuated, how it was actuated, and the circumstances resulting in its actuation.

Unit: One

Date: October 13, 1995

Valve Actuated:                      No. & Type of Actuation:

1-203-3B

1 Manual

Plant Conditions: Reactor Pressure 1005 psig

Description of Events: Trouble Shooting/Maintenance

### 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: 13 Cycle: 14
2. Scheduled date for next refueling shutdown: 2/5/96
3. Scheduled date for restart following refueling: 5/15/96
4. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment:  
  
NO
5. Scheduled date(s) for submitting proposed licensing action and supporting information:  
  
7-4-95
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:  
  
232 GE10 Fuel Bundles will be loaded during Q1R14.
7. The number of fuel assemblies.
  - a. Number of assemblies in core: 726
  - b. Number of assemblies in spent fuel pool: 1717
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: 13 Cycle: 14
2. Scheduled date for next refueling shutdown: 1-6-97
3. Scheduled date for restart following refueling: 3-30-97
4. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment:  
  
YES
5. Scheduled date(s) for submitting proposed licensing action and supporting information:  
  
November, 1996
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:  
  
Approx. 200 Siemens 9X9IX Power Corporation Fuel Bundles will be loaded during Q2R14.
7. The number of fuel assemblies.
- a. Number of assemblies in core: 724
- b. Number of assemblies in spent fuel pool: 3377
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:

## 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