

QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

FEBRUARY 1984

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 AND 50-265

LICENSE NOS. DPR-29 AND DPR-30

8403130382 840229  
PDR ADOCK 05000254  
R PDR

## TABLE OF CONTENTS

- I. Introduction
- II. Summary of Operating Experience
  - A. Unit One
  - B. Unit Two
- III. Plant or Procedure Changes, Tests, Experiments, and Safety Related Maintenance
  - A. Amendments to Facility License or Technical Specifications
  - B. Facility or Procedure Changes Requiring NRC Approval
  - C. Tests and Experiments Requiring NRC Approval
  - D. Corrective Maintenance of Safety Related Equipment
- IV. Licensee Event Reports
- V. Data Tabulations
  - A. Operating Data Report
  - B. Average Daily Unit Power Level
  - C. Unit Shutdowns and Power Reductions
- VI. Unique Reporting Requirements
  - A. Main Steam Relief Valve Operations
  - B. Control Rod Drive Scram Timing Data
- VII. Refueling Information
- VIII. Glossary

## 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 Becky Brown and Alex Misak, telephone number 309-654-2241, extensions 127 and 194.

## II. SUMMARY OF OPERATING EXPERIENCE

### A. Unit One

February 1-11: Unit One began the month operating at full power and continued at this level until 0030 hours on February 5 when the unit dropped load to 700 MWe for weekly Turbine tests. Following the tests, the unit increased load to full power and maintained that load until February 7 when the unit began experiencing fuel depletion deratings due to end of cycle coastdown.

February 12-26: At 0001 hours on February 12, the unit dropped load to 700 MWe for weekly Turbine tests. Following the tests, the unit dropped load to 660 MWe for control rod pattern adjustments. Following these adjustments, the unit began a normal load increase. On two other occasions, February 19 and February 26, weekly Turbine tests were performed which necessitated load reductions to 700 MWe.

February 27-29: At 2215 hours on February 28, the unit dropped load to 650 MWe in preparation for an Economic Generation Control (EGC) system test. At 1230 hours on February 29, the unit increased load to 740 MWe and maintained this load until 1550 hours when the unit dropped load to 700 MWe in preparation for an EGC system test.

### B. Unit Two

February 1-20: Unit Two began the month shutdown for End of Cycle Six Refueling and maintenance. At 0045 hours on February 18, unit startup commenced. At 0303 hours, the Reactor was critical, and the unit was on line at 1957 hours. At 2033 hours, the Turbine was manually tripped due to high Turbine vibration. At 0348 hours on February 19, the unit was placed on line with a load of 160 MWe. This load was maintained until 1000 hours when the unit was shutdown to repair various valve packing leaks. The unit remained shutdown until 1820 hours on February 20 when the Generator was placed on line with a load of 150 MWe.

February 21-29: At 1730 hours on February 21, the unit began increasing load to 350 MWe by pulling control rods. Load was maintained at 350 MWe due to the 2B Recirculation Pump Motor-Generator Set being out of service for repairs. At 1405 hours on February 23, the unit was placed in Hot Standby due to high Turbine vibration. The unit was placed on line at 0210 hours on February 25 with a load of 180 MWe. At 1700 hours, the unit began increasing load to 500 MWe. At 1830 hours, the unit began a normal shutdown to replace the motor on the 'B' Recirculation Pump Suction Valve. The unit was off line from 2205 hours on February 25 to 0608 hours on February 27 when the Generator was placed on line, and a normal load increase was initiated.

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

A. Amendments to Facility License or Technical Specifications

On January 24, 1984, the NRC issued Amendment 80 to License DPR-30. This Amendment established new actuation setpoints for the Target Rock Safety Relief Valve and two Electromatic Relief Valves. It also defined new Minimum Critical Power Ratio limits for steady state operation at rated core flow. The Amendment also shows the new Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) versus Planar Average Exposure curve for the new Unit Two core.

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 Unit 1 and Unit 2 during the reporting period. This summary includes the following headings: Work Request Numbers, LER Numbers, Components, Cause of Malfunctions, Results and Effects on Safe Operation, and Action Taken to Prevent Repetition.

UNIT ONE MAINTENANCE SUMMARY

| W.R.<br>NUMBER | LER<br>NUMBER | COMPONENT   | CAUSE<br>OF<br>MALFUNCTION          | RESULTS & EFFECTS<br>ON<br>SAFE OPERATION  | ACTION TAKEN TO<br>PREVENT REPETITION  |
|----------------|---------------|---|-------------------------------------|--|--|
| Q31892         |               | 1-3999-515A RHR<br>Service Water<br>Vault Sump Dis-<br>charge Check Valve | Rust and dirt froze<br>the plunger. | The valve leaked through<br>but the vault sump pump<br>maintained the integrity<br>of the vault. | The valve was dis-<br>assembled, cleaned,<br>lapped, reassembled,<br>and LLRT'd. An<br>investigation was<br>started concerning<br>the valve reliability. |
| Q31893         |               | 1-3999-516A RHR<br>Service Water<br>Vault Sump Dis-<br>charge Check Valve | Rust and dirt froze<br>the plunger. | The valve leaked through<br>but the vault sump pump<br>maintained the integrity<br>of the vault. | The valve was dis-<br>assembled, cleaned,<br>lapped, reassembled,<br>and LLRT'd. An<br>investigation was<br>started concerning<br>the valve reliability. |



## UNIT TWO MAINTENANCE SUMMARY

| W.R.<br>NUMBER | LER<br>NUMBER | COMPONENT                     | CAUSE<br>OF<br>MALFUNCTION                             | RESULTS & EFFECTS<br>ON<br>SAFE OPERATION   | ACTION TAKEN TO<br>PREVENT REPETITION  |
|----------------|---------------|-------------------------------|--|---|--|
| Q25817         | 83-6/03L      | 2-203-2B MSIV<br>Limit Switch | The 'B' channel<br>10% closure limit<br>switch failed. | The MSIV failed to<br>initiate a half-scam<br>during testing. The<br>half-scam was<br>initiated manually. | The limit switch<br>was replaced.  |
| Q27288         |               | 2-5401B SJAE<br>Suction Valve | Horizontal position<br>of valve.                       | The valve did not<br>close. It was<br>manually assisted<br>closed.  | The valve internals<br>were cleaned. The<br>valve has a person<br>stationed near it to<br>assist it, and is<br>always, otherwise,<br>kept closed. The<br>valve has since been<br>replaced. |
| Q28869         |               | 2-5401B SJAE<br>Suction Valve | The valve was<br>improperly<br>installed.              | The valve failed to<br>close on an<br>isolation signal. It<br>is normally kept<br>closed.                 | The SJAE suction<br>valve has since been<br>replaced with a<br>Butterfly valve.  |
| Q28972         | 83-15/03L     | FCV 2-8802C                   | The valve internals<br>were worn.                      | The valve leaked<br>substantially during<br>LLRT.   | The seat was lapped<br>and the disc was<br>cleaned.  |
| Q29176         | 83-15/03L     | CV 2-1301-41                  | The valve internals<br>were worn.                      | The valve leaked<br>substantially during<br>LLRT.   | The seat was lapped<br>and the hinge pin,<br>disc, and all seats<br>and gaskets were<br>replaced.  |

UNIT TWO MAINTENANCE SUMMARY

| W.R.<br>NUMBER | LER<br>NUMBER | COMPONENT  | CAUSE<br>OF<br>MALFUNCTION   | RESULTS & EFFECTS<br>ON<br>SAFE OPERATION   | ACTION TAKEN TO<br>PREVENT REPETITION   |
|----------------|---------------|--|--|---|---|
| Q30316         |               | Various Mechanical<br>Snubbers                       | Wear.  | Various Mechanical<br>Snubbers were<br>functionally tested.<br>9481, 7327, 7732,<br>16565, 16558, 12700,<br>and 1488 failed.  | The Snubbers that<br>failed the functional<br>test were sent to<br>Wyle Laboratories<br>to be overhauled. |
| Q31102         |               | 2-2301-5 had<br>control and motor<br>cable replaced. | The control and<br>motor cable had<br>failed due to a<br>small steam leak. | The valve tripped during<br>logic testing. It was<br>not required operable<br>at the time. The valve<br>would fail open to<br>provide HPCI service<br>and the in-line 2-2301-4<br>valve would provide<br>isolation. | The cables were<br>replaced and cables<br>in the area and on<br>UI were inspected.                        |



#### 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 ONE

| <u>Licensee Event<br/>Report Number</u> | <u>Date</u> | <u>Title of Occurrence</u> |
|---|-------------|----------------------------|
|---|-------------|----------------------------|

There were no Licensee Event Reports, for Unit One, for the reporting period.

##### UNIT TWO

|           |         |                              |
|-----------|---------|------------------------------|
| 84-03/03L | 2-11-84 | Loss of Bus 28 & 29          |
| 84-04/03L | 2-15-84 | Reactor Scram While Shutdown |

## 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

# OPERATING DATA REPORT

DOCKET NO. 50-254

UNIT ONE

DATE February 7

COMPLETED BY Alex Misak

TELEPHONE 309-654-2241x194

## OPERATING STATUS

0000 020184

1. Reporting period: 2400 022984 Gross hours in reporting period: 696

2. Currently authorized power level (MWt): 2511 Max. Depend capacity (MWe-Net): 769\* Design electrical rating (MWe-Net): 789

3. Power level to which restricted (if any) (MWe-Net): NA

4. Reasons for restriction (if any):

|  | This Month     | Yr. to Date    | Cumulative       |
|--|----------------|----------------|------------------|
| 5. Number of hours reactor was critical  | <u>696.0</u>   | <u>1440.0</u>  | <u>84995.6</u>   |
| 6. Reactor reserve shutdown hours  | <u>0.0</u>     | <u>0.0</u>     | <u>3421.9</u>    |
| 7. Hours generator on line   | <u>696.0</u>   | <u>1440.0</u>  | <u>81787.9</u>   |
| 8. Unit reserve shutdown hours.  | <u>0.0</u>     | <u>0.0</u>     | <u>909.2</u>     |
| 9. Gross thermal energy generated (MWH)  | <u>1643681</u> | <u>3406884</u> | <u>168513590</u> |
| 10. Gross electrical energy generated (MWH)                                    | <u>545050</u>  | <u>1129512</u> | <u>54388128</u>  |
| 11. Net electrical energy generated (MWH)                                      | <u>517997</u>  | <u>1073371</u> | <u>50679338</u>  |
| 12. Reactor service factor   | <u>100.0</u>   | <u>100.0</u>   | <u>82.1</u>      |
| 13. Reactor availability factor  | <u>100.0</u>   | <u>100.0</u>   | <u>85.4</u>      |
| 14. Unit service factor  | <u>100.0</u>   | <u>100.0</u>   | <u>79.0</u>      |
| 15. Unit availability factor   | <u>100.0</u>   | <u>100.0</u>   | <u>79.9</u>      |
| 16. Unit capacity factor (Using MDC)   | <u>96.8</u>    | <u>96.9</u>    | <u>63.7</u>      |
| 17. Unit capacity factor (Using Des. MWe)                                      | <u>94.3</u>    | <u>94.5</u>    | <u>62.1</u>      |
| 18. Unit forced outage rate  | <u>0.0</u>     | <u>0.0</u>     | <u>6.2</u>       |
| 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             |                |                | <u>NA</u>        |

\*The MDC may be lower than 769 MWe during periods of high ambient temperature due to the thermal performance of the spray canal.

#UNOFFICIAL COMPANY NUMBERS ARE USED IN THIS REPORT

# OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT TWO

DATE February 7

COMPLETED BY Alex Misak

TELEPHONE 309-654-2241x194

## OPERATING STATUS

0000 020184

1. Reporting period: 2400 022984 Gross hours in reporting period: 696

2. Currently authorized power level (MWt): 2511 Max. Depend capacity (MWe-Net): 769\* Design electrical rating (MWe-Net): 789

3. Power level to which restricted (if any) (MWe-Net): NA

4. Reasons for restriction (if any):

|  | This Month    | Yr. to Date   | Cumulative       |
|--|---------------|---------------|------------------|
| 5. Number of hours reactor was critical  | <u>245.5</u>  | <u>245.5</u>  | <u>78163.0</u>   |
| 6. Reactor reserve shutdown hours  | <u>0.0</u>    | <u>0.0</u>    | <u>2985.8</u>    |
| 7. Hours generator on line   | <u>160.3</u>  | <u>160.3</u>  | <u>75370.1</u>   |
| 8. Unit reserve shutdown hours.  | <u>0.0</u>    | <u>0.0</u>    | <u>702.9</u>     |
| 9. Gross thermal energy generated (MWH)  | <u>193783</u> | <u>193783</u> | <u>155575871</u> |
| 10. Gross electrical energy generated (MWH)                                    | <u>58218</u>  | <u>58218</u>  | <u>49493998</u>  |
| 11. Net electrical energy generated (MWH)                                      | <u>53862</u>  | <u>53338</u>  | <u>46387398</u>  |
| 12. Reactor service factor   | <u>35.3</u>   | <u>17.0</u>   | <u>76.2</u>      |
| 13. Reactor availability factor  | <u>35.3</u>   | <u>17.0</u>   | <u>79.1</u>      |
| 14. Unit service factor  | <u>23.0</u>   | <u>11.1</u>   | <u>73.5</u>      |
| 15. Unit availability factor   | <u>23.0</u>   | <u>11.1</u>   | <u>74.2</u>      |
| 16. Unit capacity factor (Using MDC)   | <u>10.1</u>   | <u>4.8</u>    | <u>58.8</u>      |
| 17. Unit capacity factor (Using Des. MWe)                                      | <u>9.8</u>    | <u>4.7</u>    | <u>57.3</u>      |
| 18. Unit forced outage rate  | <u>40.2</u>   | <u>40.2</u>   | <u>8.7</u>       |
| 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             |               |               | <u>NA</u>        |

\*The MDC may be lower than 769 MWe during periods of high ambient temperature due to the thermal performance of the spray canal.

\*UNOFFICIAL COMPANY NUMBERS ARE USED IN THIS REPORT

APPENDIX B  
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-254

UNIT ONE

DATE February 7

COMPLETED BY Alex Misak

TELEPHONE 309-654-2241x194

MONTH February 1984

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

|     |              |
|-----|--------------|
| 1.  | <u>779.8</u> |
| 2.  | <u>768.3</u> |
| 3.  | <u>780.7</u> |
| 4.  | <u>790.8</u> |
| 5.  | <u>619.0</u> |
| 6.  | <u>870.5</u> |
| 7.  | <u>783.1</u> |
| 8.  | <u>783.0</u> |
| 9.  | <u>777.7</u> |
| 10. | <u>780.8</u> |
| 11. | <u>763.6</u> |
| 12. | <u>672.6</u> |
| 13. | <u>784.4</u> |
| 14. | <u>749.0</u> |
| 15. | <u>760.0</u> |
| 16. | <u>762.0</u> |

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

|     |              |
|-----|--------------|
| 17. | <u>749.4</u> |
| 18. | <u>746.8</u> |
| 19. | <u>737.9</u> |
| 20. | <u>744.5</u> |
| 21. | <u>737.7</u> |
| 22. | <u>745.7</u> |
| 23. | <u>737.5</u> |
| 24. | <u>708.4</u> |
| 25. | <u>732.8</u> |
| 26. | <u>713.8</u> |
| 27. | <u>719.9</u> |
| 28. | <u>710.0</u> |
| 29. | <u>637.8</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.

APPENDIX B  
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-265

UNIT TWO

DATE February 7

COMPLETED BY Alex Misak

TELEPHONE 309-654-2241x194

MONTH February 1984

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

|     |              |
|-----|--------------|
| 1.  | <u>-4.3</u>  |
| 2.  | <u>-5.0</u>  |
| 3.  | <u>-7.2</u>  |
| 4.  | <u>-7.4</u>  |
| 5.  | <u>-7.0</u>  |
| 6.  | <u>-7.4</u>  |
| 7.  | <u>-7.7</u>  |
| 8.  | <u>-6.3</u>  |
| 9.  | <u>-6.1</u>  |
| 10. | <u>-6.0</u>  |
| 11. | <u>-6.0</u>  |
| 12. | <u>-6.9</u>  |
| 13. | <u>-6.6</u>  |
| 14. | <u>-7.1</u>  |
| 15. | <u>-2.7</u>  |
| 16. | <u>-11.5</u> |

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

|     |              |
|-----|--------------|
| 17. | <u>-7.8</u>  |
| 18. | <u>-11.0</u> |
| 19. | <u>32.5</u>  |
| 20. | <u>17.6</u>  |
| 21. | <u>185.7</u> |
| 22. | <u>330.0</u> |
| 23. | <u>147.7</u> |
| 24. | <u>-14.2</u> |
| 25. | <u>155.9</u> |
| 26. | <u>-9.8</u>  |
| 27. | <u>276.2</u> |
| 28. | <u>506.9</u> |
| 29. | <u>617.9</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.



ID/5A

APPENDIX D  
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13  
Revision 6  
August 1982

DOCKET NO. 050-254

UNIT NAME Quad-Cities 1

COMPLETED BY Alex Misak

DATE March 6, 1984

REPORT MONTH FEBRUARY 1984

TELEPHONE 309-654-2241

| NO.   | DATE   | TYPE<br>F OR S | DURATION<br>(HOURS) | REASON | METHOD OF<br>SHUTTING<br>DOWN REACTOR | LICENSEE<br>EVENT<br>REPORT NO. | SYSTEM<br>CODE | COMPONENT<br>CODE | CORRECTIVE ACTIONS/COMMENTS  |
|-------|--------|----------------|---------------------|--------|---------------------------------------|---------------------------------|----------------|-------------------|--|
| 84-6  | 840205 | S              | 0.0                 | B      | 5                                     |                                 | HA             | XXXXXX            | Reduced load to perform weekly Turbine tests                               |
| 84-7  | 840212 | S              | 0.0                 | B      | 5                                     |                                 | RB             | CONROD            | Reduced load for Control Rod Pattern adjustments                           |
| 84-8  | 840215 | S              | 0.0                 | B      | 5                                     |                                 | HA             | XXXXXX            | Reduced load to perform weekly Turbine tests                               |
| 84-9  | 840226 | S              | 0.0                 | B      | 5                                     |                                 | HA             | XXXXXX            | Reduced load to perform weekly Turbine tests                               |
| 84-10 | 840228 | S              | 0.0                 | B      | 5                                     |                                 | CB             | INSTRU            | Reduced load in preparation for an Economic Generation Control System test |
| 84-11 | 840229 | S              | 0.0                 | B      | 5                                     |                                 | CB             | INSTRU            | Reduced load in preparation for an Economic Generation Control System test |

APPROVED

AUG 16 1982

ID/5A

APPENDIX D  
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13

Revision 6

August 1982

DOCKET NO. 050-265

UNIT NAME Quad-Cities 2

COMPLETED BY Alex Misak

DATE March 6, 1984

REPORT MONTH FEBRUARY 1984

TELEPHONE 309-654-2241

| NO.   | DATE   | TYPE<br>FOR S | DURATION<br>(HOURS) | REASON | METHOD OF<br>SHUTTING<br>DOWN REACTOR | LICENSEE<br>EVENT<br>REPORT NO. | SYSTEM<br>CODE | COMPONENT<br>CODE | CORRECTIVE ACTIONS/COMMENTS  |
|-------|--------|---------------|---------------------|--------|---------------------------------------|---------------------------------|----------------|-------------------|--|
| 83-66 | 830904 | S             | 428.0               | C      | 4                                     |                                 | RC             | FUELXX            | Unit Two remains shutdown for End of Cycle Six Refueling and Maintenance           |
| 84-1  | 840218 | F             | 7.2                 | B      | 1                                     |                                 | HA             | ZZZZZZ            | Unit Two placed in Hot Standby due to high Turbine vibration                       |
| 84-2  | 840219 | F             | 32.3                | B      | 1                                     |                                 | ZZ             | VALVEX            | Unit Two shutdown to repair miscellaneous valve packing leaks                      |
| 84-3  | 840223 | F             | 36.1                | B      | 1                                     |                                 | HA             | ZZZZZZ            | Unit Two placed in Hot Standby due to high Turbine vibration                       |
| 84-4  | 840225 | F             | 22.0                | B      | 1                                     |                                 | CB             | MOTORX            | Unit Two shutdown to replace the motor on the 'B' Recirculation pump suction valve |

APPROVED

AUG 16 1982

## 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.

| <u>Unit</u> | <u>Date</u> | <u>Valves<br/>Actuated</u> | <u>No. &amp; Type<br/>Actuations</u> | <u>Plant<br/>Conditions</u> | <u>Description<br/>of Events</u> |
|-------------|-------------|----------------------------|--------------------------------------|-----------------------------|----------------------------------|
| 2           | 2-18-84     | 2-203-3B                   | 1 Manual                             | Rx Press<br>920             | Surveillance                     |
|             |             | 2-203-3C                   | 1 Manual                             |                             | T.S. 4.5.D.1.b                   |
|             |             | 2-203-3D                   | 1 Manual                             |                             | (Post Maintenance)               |
|             |             | 2-203-3E                   | 1 Manual                             |                             | Replaced Valve                   |
|             |             | 2-203-3A                   | 1 Manual                             |                             |                                  |

B. CONTROL ROD DRIVE SCRAM TIMING DATA FOR UNITS ONE AND TWO

The basis for reporting this data to the Nuclear Regulatory Commission are specified in the surveillance requirements of Technical Specifications 4.3.C.1 and 4.3.C.2.

The following table is a complete summary of Units One and Two Control Rod Drive Scram Timing for the reporting period. All scram timing was performed with reactor pressure greater than 800 psig.

# RESULTS OF SCRAM TIMING MEASUREMENTS

PERFORMED ON UNIT 1 & 2 CONTROL

ROD DRIVES, FROM 1-1 TO 12-31-84

| DATE | NUMBER<br>OF RODS | AVERAGE TIME IN SECONDS AT %<br>INSERTED FROM FULLY WITHDRAWN |       |      |      | Max. Time<br>For 90%<br>Insertion | DESCRIPTION  |
|------|-------------------|---|-------|------|------|-----------------------------------|--|
|      |                   | 5   | 20    | 50   | 90   |                                   |  |
|      |                   | 0.375   | 0.900 | 2.00 | 3.5  |                                   |  |
| 2-21 | 177               | 0.31  | 0.69  | 1.47 | 2.59 | 3.25<br>(J-10)                    | Technical Specification 3.3.C.1 &<br>3.3.C.2 (Average Scram Insertion Time)<br><br>Unit 2 Hot Scram Timing<br>A & B Sequence |

## 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

QTP 300-S32  
Revision 1  
March 1978

\*

1. Unit: Q1 Reload: 7 Cycle: 8
2. Scheduled date for next refueling shutdown: 3-11-84
3. Scheduled date for restart following refueling: 5-21-84
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: Yes. Preparatory Technical Specification changes will be submitted to include MAPLHGR curve for one of the reload fuel types and extending MAPLHGR curve for BLTA to 45,000 MWD/t.
5. Scheduled date(s) for submitting proposed licensing action and supporting information:

Technical Specification change will be submitted February 15, 1984.

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:
  - 1) All new fuel assemblies will be GE7B-type (barrier clad, extended exposure design).
  - 2) A generic methodology was used for the analysis of the Control Rod Drop Accident and Rod Withdrawal Error events.
  - 3) The two Zirconium Barrier Lead Test Assemblies will be re-inserted to gather information on the effects of extended exposures.
7. The number of fuel assemblies.
  - a. Number of assemblies in core: 724
  - b. Number of assemblies in spent fuel pool: 1730
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: 2003

APPROVED

APR 20 1978

Q. C. O. S. R.

QUAD-CITIES REFUELING  
INFORMATION REQUEST

QTP 300-S32  
Revision 1  
March 1978

\*

1. Unit: Q2 Reload: 6 Cycle: 7
2. Scheduled date for next refueling shutdown: 9-5-83
3. Scheduled date for restart following refueling: 11-12-83
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment:  
No, however, a change to the Technical Specifications is being submitted (see below).
5. Scheduled date(s) for submitting proposed licensing action and supporting information:  
  
June 14, 1983 (Scheduled)
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:
  - 1) All new fuel assemblies will be of barrier design; MAPLHGR curves will be relabeled to include the barrier designation.
  - 2) The use of improved assumptions in the load reject without bypass analysis resulted in a much improved MCPR operating limit. Technical Specifications are being changed to provide this additional operating margin.
7. The number of fuel assemblies.
  - a. Number of assemblies in core: 724
  - b. Number of assemblies in spent fuel pool: 412
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: 2003

APPROVED

APR 20 1978

Q. C. O. S. R.

## 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   |
| PCOMR    | - | 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  |



**Commonwealth Edison**

Quad Cities Nuclear Power Station  
22710 206 Avenue North  
Cordova, Illinois 61242  
Telephone 309/654-2241

NJK-84-80

March 8, 1984

Director, Office of Inspection & Enforcement  
United States Nuclear Regulatory Commission  
Washington, D. C. 20555  
Attention: Document Control Desk

Gentlemen:

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 February 1984.

✓  
Very truly yours,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis  
Station Superintendent

bb

Enclosure

IE24  
1/1