QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

JANUARY 1981

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 AND 50-265

LICENSE NOS. DPR-29 AND DPR-30

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

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 condenser cooling method is a closed-cycle spray canal, and 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 1 and 2 respectively were October 18, 1971, and April 26, 1972. Commercial generation of power began on February 18, 1973 for Unit 1 and March 10, 1973 for Unit 2.

This report was compiled by Becky Brown and Robert Tubbs, telephone number 309-654-2241, extensions 245 and 174.

II. SUMMARY OF OPERATING EXPERIENCE

A. UNIT ONE

January 1-6: Unit One began the reporting period at 600 MWe, increasing at 5 MWe/hour. Load was held at 650 MWe at 1045 and was maintained at that level until 1530 on January 6, except for a short load reduction due to vacuum problem. At 1530 load was again increased at a rate of 5 MWe/hour.

January 7-10: Load was increased, at 5 MWe/hour, until a load of 777 MWe was reached at 1200. This load was held until 2100 on January 9 when load was reduced in preparation for shutdown. On January 10, at 0214, the generator was tripped off-line for a maintenance outage. Work performed was mostly limited to valve repairs.

January 11-15: On January 11, at 1959, the reactor was brought critical and the turbine put on line at 0757 on January 12. Power was increased at various rates and hold times until a load of 770 MWe was reached and held at 1410, on January 15.

January 16-21: Over this six day period load was held at an average of 769 MWe. The only deviations were a short drop on January 18 for turbine tests, and a small increase on January 21 when the D1 heater was restored to service.

January 22-27: At 0200, on January 22, during routine CRD exercise, a control rod over-traveled. As a result, the control rod was fully inserted and electrically de-energized with a resulting load drop to 752 MWe. At 2200 load was dropped to 425 MWe while the rod was re-coupled and withdrawn. Power was then increased at various rates until load was held at 825 MWe on January 25. On January 26 and 27 load was depressed by a xenon transient until a load of 824 MWe was reached on January 27.

January 28-31: During this four day period an average load of 825 MWe was held. Unit One ended the reporting period holding a load of 820 MWe.

B. UNIT TWO

January 1-16: Unit Two began the reporting period at a load of 732 MWe, increasing at 5 MWe/hour. At 1500 load was held at 800 MWe. During the remainder of this sixteen day period, load was held at an average of 783 MWe. The only exceptions were load drops for turbine weekly surveillance on January 4 and 11.

January 17-20: On January 17, load was dropped to 200 MWe to perform a control rod sequence change. Load was then increased at various rates until January 20. On that day, at 1500, load was held at 770 MWe.

January 21-23: Over this three day period load was held at an average of 765 MWe.

January 24-27: On January 24, load was dropped to 425 MWe to adjust the control rod pattern per the Nuclear Engineer's direction. Load was then increased at 5 MWe/hour until a load of 795 MWe was held at 0550 on January 27.

January 28-31; An average load of 784 MWe was held on January 28 and 29. On January 30 load was dropped in preparation for a maintenance outage. The turbine was tripped off-line at 2216, and the unit remained shutdown for the remainder of the reporting period.

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

A. Amendments to Facility License or Technical Specifications

There were no amendments to Facility License or Technical Specifications for the reporting period.

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 safety related maintenance performed on Unit One and Unit Two during the reporting period. The headings indicated in this summary include: 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. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q09482		CRD 46-43	Flange bolts were loose.	Drive had a minor flange leak, discovered during test. Unit was shutdown.	Retorqued CRD to 350 ft.-lbs.
Q09483		CRD 34-35	Flange bolts were loose.	Drive had a minor flange leak, discovered during test. Unit was shutdown.	Retorqued CRD to 350 ft.-lbs.
Q09481		CRD 18-39	Flange bolts were loose.	Drive had a minor flange leak, discovered during test. Unit was shutdown.	Retorqued CRD to 350 ft.-lbs.
Q07820	80-25/01T	1A Core Spray Line	Cracks in elbows. SEE LER.	Replace 105° elbow in line located between reactor vessel and manual isolation valve.	105° bend replaced in 1A Core Spray Line; tested.
Q010205	81-1/03L	1/2B Standby Gas Treatment 1/2-7507B	Faulty auxiliary contacts.	1/2B train discharge damper won't close.	Replaced auxiliary contacts in starter circuit; tested.
Q09942		CRD Module 38-59	Worn accumulator piston seals.	Received numerous high water alarms. Scram capability not affected.	Removed old accumulator and installed new one; tested.
Q010091		CRD 26-43	Worn accumulator piston seals.	Accumulator water level alarm came up. Scram capability not affected.	Installed new accumulator.

UNIT ONE . MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q07821	80-25/01T	1B Core Spray Line (1-1404-10"B)	Cracks in elbows. SEE LER.	Replace 105° elbow in 1B Core Spray Line located between reactor vessel and manual isolation valve 1-1402-6B.	105° radius bend installed in "B" Core Spray loop in accordance with Work Request package.
Q010005		RCIC Check Valve (1-1301-50)	Seal ring required replacing.	Valve seal ring leak in MSIV room; RCIC operability not affected.	Disassembled valve, cleaned, and replaced seal ring.
Q010286		Feedwater Check Valve (1-220-62A)	Seal ring leakage.	Caused small leak of feedwater.	Replaced seal ring.
Q00872		LPRM 08-33D	The detector was faulty.	LPRM was reading down-scale. APRM operability was not affected.	Replaced detector during refuel outage.
Q010633		24/48V 1B2 Battery Charger Er[illegible] 1-8325	Voltage regulator defective.	Voltage fluctuated erratically. System was operable.	Replaced regulator card.

UNIT TWO MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q09435		RHR (2-1001-7C)	Valve operator trips when valve reaches full closed. Faulty torque switch.	Valve normally open. LPCI was operable.	Replaced torque switch in limitorque valve operator. Valve operability & interlocks checked.
Q010634		HPCI (LS-2-2365)	Switch failed.	Switch inoperable. HPCI was operable.	Replaced mercury switch.
Q010131	80-35/03L	Drywell Equipment Drain Pump Valve (2-2001-16)	Various parts out of adjustment.	Valve took longer than required 20 seconds to close. Inboard isolation valve AO-2-2001-15 was closed.	Lengthened stroke one turn on connector nut; adjusted packing gland, reset limit switches.
Q010158	80-39/03L	RHR Valve to Torus (2-1001-34A)	Faulty auxiliary contact.	Valve will not open from 902-3 control switch.	Replaced auxiliary contact on closed contactor.

IV. LICENSEE EVENT REPORTS

The following is a tabular summary of all license 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

License Event Report Number	Date	Title of Description
81-1/03L	01-05-81	Made 1/2B Standby Gas Treatment Inoperable to repair discharge damper.
81-2/03L	01-07-81	Failure of Number 1 Diesel Generator to run after monthly inspection.
81-3/03L	01-14-81	High Drywell pressure switch PS-1-1001-90D instrument drift.
81-4/03L	01-16-81	LS-1-263-57A Low-Low Reactor Water Level instrument drift.

UNIT TWO

81-1/03L	01-16-81	High Drywell pressure switch PS-2-1001-88D instrument drift.
81-2/03L	01-16-81	Electromatic Relief valve controller drift PC-2-203-3B.

V. DATA TABULATIONS

The following data tabulations are presented in this report:

A. Operating Data Report

B. Average Daily Unit Power Level

C. Unit Shutdown and Power Reductions

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-254
UNIT ONE
DATE February 2, 1981
COMPLETED BY R C Tubbs
TELEPHONE 309-654-2241, ext. 174

MONTH January 1981

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1.	601.6	17.	742.5
2.	610.6	18.	724.3
3.	619.0	19.	728.4
4.	621.8	20.	738.7
5.	614.1	21.	740.0
6.	642.1	22.	713.4
7.	728.5	23.	533.0
8.	740.0	24.	637.3
9.	680.4	25.	774.0
10.	-.8	26.	76[illegible].9
11.	-11.9	27.	77[illegible].8
12.	240.3	28.	778.6
13.	442.7	29.	771.1
14.	568.9	30.	768.1
15.	711.6	31.	769.5
16.	733.9		

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 2, 1981
COMPLETED BY R C Tubbs
TELEPHONE 309-65-42241, ext. 174

MONTH January 1981

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1.	715.4	17.	371.7
2.	736.4	18.	522.7
3.	730.1	19.	622.8
4.	730.8	20.	696.3
5.	734.8	21.	705.3
6.	736.0	22.	713.2
7.	737.6	23.	708.4
8.	737.8	24.	436.8
9.	726.4	25.	551.8
10.	734.3	26.	651.1
11.	722.5	27.	724.8
12.	731.9	28.	730.9
13.	722.1	29.	752.5
14.	720.1	30.	618.8
15.	714.0	31.	-9.6
16.	686.3		

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.

OPERATING DATA REPORT

DOCKET NO. 50-254

UNIT ONE

DATE February 2, 1981

COMPLETED BY R C Tubbs

TELEPHONE 309-654-2241, ext. 17

OPERATING STATUS

1. Reporting period: 0000 010181 / 2400 013181 Gross hours in reporting period: 744

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): N/

4. Reasons for restriction (if any):

	This Month	Yr.to Date	Cumulative
5. Number of hours reactor was critical	742.6	742.6	61448.9
6. Reactor reserve shutdown hours	0.0	0.0	3421.9
7. Hours generator on line	742.3	742.3	58626.1
8. Unit reserve shutdown hours.	0.0	0.0	909.2
9. Gross thermal energy generated(MWH)	1503625	1503625	117745713
10. Gross electrical energy generated(MWH)	492600	492600	37871507
11. Net electrical energy generated(MWH)	467867	467867	35325146
12. Reactor service factor	99.8	99.8	80.3
13. Reactor availability factor	99.8	99.8	84.8
14. Unit service factor	99.8	99.8	76.6
15. Unit availability factor	99.8	99.8	77.8
16. Unit capacity factor (Using Des.MWe)	81.8	81.8	60.0
17. Unit capacity factor (Using MDC)	79.7	79.7	4.5
18. Unit forced outage rate	0.0	0.0	7.7

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 NA

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

OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT TWO

DATE February 2, 1981

COMPLETED BY R C Tubbs

TELEPHONE 309-654-2241, ext. 174

OPERATING STATUS

1. Reporting period: 0000 010181 / 2400 013181 Gross hours in reporting period: 744

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	702.7	702.7	59535.5
6. Reactor reserve shutdown hours	0.0	0.0	2985.8
7. Hours generator on line	690.3	690.3	56971.5
8. Unit reserve shutdown hours.	0.0	0.0	702.9
9. Gross thermal energy generated(MWH)	1658047	1658047	116858455
10. Gross electrical energy generated(MWH)	527635	527635	37249186
11. Net electrical energy generated(MWH)	489926	489926	34846878
12. Reactor service factor	94.4	94.4	78.8
13. Reactor availability factor	94.4	94.4	82.7
14. Unit service factor	92.8	92.8	75.4
15. Unit availability factor	92.8	92.8	76.3
16. Unit capacity factor (Using Des.MWe)	85.6	85.6	59.9
17. Unit capacity factor (Using MDC)	83.5	83.5	58.4
18. Unit forced outage rate	0.0	0.0	9.1

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 2-2-81

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

APPENDIX
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13
Revision 5
March 1978

DOCKET NO. 50-254

UNIT NAME QUAD-CITIES UNIT ONE

COMPLETED BY R C Tubbs

DATE February 2, 1981

REPORT MONTH JANUARY 1981

TELEPHONE 309-654-2241, ext. 174

*

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
81-1	810110	S	41.3	B	1		ZZ	ZZZZZZ	Performed Maintenance on Various Valves.
81-2	810122	S	0.0	A	5		RB	CONROD	Load reduction to recouple a control rod drive.

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13
Revision 5
March 1978

DOCKET NO. 50-265
UNIT NAME QUAD-CITIES UNIT TWO
DATE February 2, 1981
REPORT MONTH JANUARY 1981
COMPLETED BY R C Tubbs
TELEPHONE 309-654-2241, ext. 174

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
81-1	810117	S	0.0	H	5		RC	ZZZZZZ	Load reduction to change control rod pattern.
81-2	810124	S	0.0	H	5		RC	ZZZZZZ	Load reduction to change control rod pattern.
81-3	810131	S	1.4	B	1		ZZ	ZZZZZZ	Maintenance Outage to work on various valves, and check for condenser tube leaks.

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 during the reporting period.

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

There were no Control Rod Drive Scram Timings 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.

QTP 300-S32
Revision 1
March 1978

QUAD-CITIES REFUELING INFORMATION REQUEST

1. Unit: 1 Reload: 6 Cycle: 7

2. Scheduled date for next refueling shutdown: 9-12-82 (Shutdown EOC6)

3. Scheduled date for restart following refueling: 12-5-82 (Startup BOC7)

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: No, Plan 10CFR50.59 reloads for future cycles of Quad Cities Unit 1. The review will be conducted in August, 1982.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: August, 1982 for 10CFR50.59 related changes ~ 90 days prior to shutdown.

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:
   New fuel designs:

7. The number of fuel assemblies.
   a. Number of assemblies in core: 724
   b. Number of assemblies in spent fuel pool: 820

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: 1460
   b. Planned increase in licensed storage: None

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: September, 1985 (end of batch discharge capability)

APPROVED
APR 20 1978
Q.C.O.S.R.

QTP 300-S32
Revision 1
March 1978

QUAD-CITIES REFUELING INFORMATION REQUEST

1. Unit: 2 Reload: 5 Cycle: 6

2. Scheduled date for next refueling shutdown: 8-30-81 (Shutdown EOC5)

3. Scheduled date for restart following refueling: 12-20-81 (Startup BOC6)

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: No, Plan 10CFR50.59 Reloads for future cycles of Quad Cities Unit 2. The review will be conducted by early August, 1981.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: Early August, 1981 for 10CFR50.59 related changes ~90 days prior to shutdown.

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:
   New Fuel Design: 1. Barrier Fuel
   2. Control Cell Core

7. The number of fuel assemblies.
   a. Number of assemblies in core: 724
   b. Number of assemblies in spent fuel pool: 672

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: 1460
   b. Planned increase in licensed storage: None

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: September, 1984
   (End of batch discharge capability)

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:

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