QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

AUGUST 1979

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 and 50-265

LICENSE NOS. DPR-29 and DPR-30

957086

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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 Commonwelath 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, Inc. 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 David Hannum, telephone number 309-654-2241, ext. 179.

II. SUMMARY OF OPERATING EXPERIENCE

A. Unit One

August 1: Unit One began the reporting period operating at 791 MWe.

August 2-11: Unit One held an average load of 775 MWe. Load was reduced to 650 MWe on August 4 for turbine testing and condensate demineralizer backwashing.

August 12: Load was reduced to 500 MWe for main condenser flow reversal.

August 13: Unit One held an average load of 766 MWe.

August 14-15: At 0418, the Unit One Reactor scrammed from a loss of main condenser vacuum. Prior to the scram, a gradual loss of vacuum caused load to be reduced to 270 MWe. A failure of air ejector 1B was suspected, and in-leakage was investigated over the subsequent weeks. At 1637 the reactor was made critical, with air ejector 1A in service. No vacuum problems were encountered during unit startup. On August 15 at 0309 Unit One was placed on-line and load was subsequently increased at the rate of 56 MWe/hr.

August 16-31: Unit One held an average load of 800 MWe. Load was reduced to 700 MWe for weekly turbine testing on August 19 and August 25.

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B. Unit Two

August 1: Unit Two began the reporting period operating at 543 MWe.

August 2-31: Unit Two held an average gross load of 514 MWe. Load decreased throughout the month due to end of fuel cycle coastdown. On August 16 load was reduced to 330 MWe due to low system demand and reactor feedwater pump flow indication problems. On August 29, load was also reduced to 390 MWe for main condenser flow reversal.

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

A. Amendments to Facility License or Technical Specification

The following amendments were added to the Technical Specifications during the reporting period:

Amendment 52 to DPR-29, and Amendment 49 to DPR-30.

These changes are as follows:

1. Paragraph 3.E Recirculation Loop Inoperable is deleted.
2. Paragraph 3.F Security Plan is renumbered 3.E.
3. Paragraph 3.F is added as follows:

3.F The licensee may proceed with and is required to complete the modifications indentified in Paragraphs 3.1.1 through 3.1.13 of the NRC's Fire Protection Safety Evaluation (SE), dated July 27, 1979 for the facility. These modifications will be completed in accordance with the schedule in Table 3.1 of the SE and supplements thereto.

In addition, the licensee shall submit the additional information identified in Table 3.2 of this SE in accordance with the schedule contained therein. In the event these dates for submittal cannot be met, the licensee shall submit a report, explaining the circumstances, together with a revised schedule.

The licensee is required to implement the administrative controls identified in Section 6 of the SE. The administrative controls shall be in effect immediately, except for those modifications indicated in Section 3.1 of the SE, which shall become effective on the dates indicated in Table 3.1 of the SE.

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Amendment 53 to DPR-29 and Amendment 50 to DPR-30.

These changes are as follows:

1. Technical Specification 4.8.2 is revised to indicate that the in-vessel sample program shall conform to ASTM E 185-66 and 10CFR50 Appendix H.
2. Table 4.6.2 is added to indicate the sample withdrawal schedule.

B. Facility or Procedure Changes Requiring NRC Approval

There were no facility or procedure changes requiring NRC approval during the reporting period.

C. Tests or Experiments Requiring NRC Approval

There were no tests or experiments performed during the reporting period requiring NRC approval.

D. Other Changes, Tests, and Experiments

1. Facility Modifications.

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M-4-2-75-73

RHR Service Water Vault Pumps

Description of Modification

This modification was to install receiver/pump units in each of the RHR service water vaults. These units were designed to collect the seal water leakage from the RHR service water pumps and pump it into the service water discharge header. The intent of this modification was to reduce the drainage and humidity problems which had been experienced in the service water vaults.

Summary of Safety Evaluation

The new receiver/pumps will reduce leakage into the vaults and prevent standing water from accumulatng thus improving system reliability. The new vault penetrations have been tested to assure leak tightness. The margin of safety as defined in the Technical Specifications is not reduced since the new system will improve vault drainage capabilities.

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M-4-1(2)-77-8

RHR Service Water Vault Bulkhead Doors

Pressure Test Taps

Description of Modification

These modifications involved installation of pressure test taps between the double gasket seals on the RHR service water vault bulkhead doors. These test taps will enable the volume between the two gaskets to be pressurized so that the seal area may be checked to verify the service water vault flood protection system integrity.

Summary of Safety Evaluation

The test tap is a passive component and does not change the door's structural arrangement or reduce the structural integrity in any way. The margin of safety as defined in the basis for the Technical Specifications is not reduced since the modification allows for a more efficient means of testing which meets the requirements of the Technical Specifications.

2. Special Tests.

Special Test 2-19

Unit Two Suppression Chamber -

Drywell Vacuum Breakers

Purpose:

The purpose of this test was to allow an evaluation for the drywell-torus vacuum breakers. This test documents an experimental change to the limit switch mounting bracket and valve operating arm in an effort to improve valve performance during surveillance testing. This test affects only valves AO-2-1601-32D and AO-2-1601-33A.

Summary fo Safety Evaluation:

This test was an effort to improve the performance of the vacuum breakers during monthly exercising. The operation of the vacuum breakers was not changed from that as given by the FSAR. The indicating and test circuitry remained unchanged as did the force necessary to open the valves. The limit switches and disc were the same.

E. 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
Q00511		SJAE Suction Valve (AO 1-5401B)	The solenoid valve o-rings were worn.	The valve would not open. Mech. Vac. Pump was isolated.	The o-rings were replaced and the valve cycled 3 times.
Q00510		SJAE Suction Valve (AO 1-5401A)	The solenoid valve o-rings were worn.	The valve would not open. Mech. Vac. Pump was isolated.	The o-rings were replaced and the valve was cycled 3 times.
Q00552		RHR HX Valve (1-1001-4A)	The torque switch needed adjustment.	The valve would not re-open electrically. Redundant RHR paths were available and the valve would open manually.	The thermals were replaced and the torque switch was readjusted. The valve was cycled 3 times.
Q00551		RHR HX Valve (1-1001-186A)	The torque switch needed adjusting.	The thermals tripped when trying to operate valve. RHR was operable.	The torque switch was re-adjusted and the valve cycled 3 times.
3067-79		U-1 IRM #17 1-755	IRM #17 read low on range 10.	Redundant IRM's on that RPS channel would have tripped had high flux occurred.	Repaired H.V. power supply and adjusted pre-amp overlap.
3800-79		HPCI Gland Seal Cooling Water Pump (1-2301-57)	The common field wiring in the MCC was defective.	The pump tripped when trying to start. The HPCI turbine was still operable. Pump used only during testing.	The common wiring was repaired and the pump was tested.
3254-79		HPCI Test Vlv (1-2301-10)	The torque spring was locking.	The thermals tripped when trying to operate the valve. The primary mode of the HPCI system was operable at all times.	A grease line was installed to relieve hydraulic lock on the torque spring. The valve was test operated 3 times.
3806-79		HPCI Press. Transmitter (1-2359)	The pressure transmitter was out of calibration.	The pressure transmitter was sending a low signal. HPCI was operable.	The transmitter was re-calibrated.
3871-79		SBGT Inlet Screen (1-5741)	Hold down bolts were missing from the inlet screen.	The screen was loose. SBGT was still operable.	New bolts were installed.

UNIT ONE MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
3846-79		HPCI Valve (1-2301-49)	The valve operator gasket was defective.	HPCI was operable.	The gasket was replaced and the valve tested.
3935-79		LPRM 48-41A (1-756)	The card was defective.	The LPRM read downscale while bypassed.	The LPRM card was replaced.
Q00509		CRD 22-23 Scram Solenoid Valve (1-305-118)	The valve was defective.	The valve was hot and making noise.	The valve was replaced and tested.
4103-79		Snubber on RCK Vlv. (1-1301-60)	The snubber was loose.	The snubber was loose but still capable of its designed function.	The snubber was tightened.
3620-79		Core Spray Test Valve (1-1402-4A)	An aux contact was defective.	The valve would not open. Core Spray was operable. Normal position is closed.	The aux contact was replaced.
3550-79		Off Gas High Pressure Switch (PIS-1-5441-16A and B)	Pressure switch needed calibration.	The operator received the off gas high pressure alarm. The off gas system was operating properly.	The switch was calibrated and tested.

UNIT TWO MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
3551-79	79-13/03L	RHR Suction Vlv (2-1001-7C)	The thermals tripped.	The valve would not open. The 2A, 2B and 2D pumps were operable and available if needed. LPCI Mode was operable.	The thermals were reset. Amperage checks were made and the valve test operated 3 times.
3598-79		RHR HX Bypass Valve (2-1001-16B)	The thermals tripped.	The bypass valve failed closed. RHR was still operable with flow through the heat exchanger.	The thermals were reset. Amperage checks were made and the valve was cycled 3 times.
3717-79		APRM #6 (2-750-10D)	The slide wire was shorted to ground.	The chart was driving downscale.	The slide wire was repositioned.
3722-79	79-14/03L	RCIC Steam Supply Valve (2-1301-16)	The torque switch was defective.	The valve would not close. RCIC was still operable, as was HPCI. Isolation valve MO-2-1301-17 was operable.	The torque switch was replaced. The aux contacts in the MCC were also replaced.

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

Licensee Event Report Number	Date of Occurrence	Title of Occurrence
79-25/03L	8-13-79	HPCI Area High Temperature Switch Drift

UNIT TWO

Licensee Event Report Number	Date of Occurrence	Title of Occurrence
79-16/03L	8-15-79	HPCI Area High Temperature Switch Drift
79-17/03L	8-22-79	Torus to Drywell Vacuum Breaker Division #1 Alarm Failure

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

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OPERATING DATA REPORT

DOCKET NO. 050-254

UNIT One

DATE 9-5-79

POOR ORIGINAL

COMPLETED BY D. Hannum

TELEPHONE (309) 654-2241, Ext. 179

OPERATING STATUS

1. Reporting period: 0000 080179 / 2400 083179 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	731.1	4754.5	52087.4
6.	Reactor reserve shutdown hours	0.0	0.0	3329.6
7.	Hours generator on line	721.2	4615.1	49558.0
8.	Unit reserve shutdown hours.	0.0	19.8	909.2
9.	Gross thermal energy generated (MWH)	1711778	10056740	98864616
10.	Gross electrical engergy generated (MWH)	549306	3191580	31764075
11.	Net electrical Energy Generated	523758	3013483	29646056
12.	Reactor service factor	98.3	81.5	81.3
13.	Reactor availabilify factor	98.3	81.5	86.5
14.	Unit service factor	96.9	79.1	77.4
15.	Unit availability factor	96.9	79.5	78.8
16.	Unit capactiy factor (Using MDC)	91.5	67.2	60.2
17.	Unit capacity factor (Using Des. MWe)	89.2	65.5	58.7
18.	Unit forced outage rate	3.1	3.6	7.8

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.

957101

February 1977

OPERATING DATA REPORT

POOR ORIGINAL

DOCKET NO. 050-265

UNIT Two

DATE 9-5-79

COMPLETED BY D. Hannum

TELEPHONE (309) 654-2241, Ext. 179

OPERATING STATUS

1. Reporting period: 0000 080179 2400 083179 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	744	5728.9	51105.3
6.	Reactor reserve shutdown hours	0.0	0.0	2985.8
7.	Hours generator on line	744	5682.7	48785.6
8.	Unit reserve shutdown hours.	0.0	0.0	702.9
9.	Gross thermal energy generated (MWH)	1270794	11462766	100204890
10.	Gross electrical engergy generated (MWH)	382097	3550759	32039136
11.	Net electrical Energy Generated	342893	3272260	30033720
12.	Reactor service factor	100.0	98.2	80.9
13.	Reactor availabilify factor	100.0	98.2	85.7
14.	Unit service factor	100.0	97.5	77.3
15.	Unit availability factor	100.0	97.5	78.4
16.	Unit capactiy factor (Using MDC)	59.9	73.0	61.9
17.	Unit capacity factor (Using Des. MWe)	58.4	71.1	60.3
18.	Unit forced outage rate	0.0	0.6	9.5

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.

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POOR ORIGINAL

Docket No. 050-254

Unit One

Date 9-5-79

Completed by D. Hannum

Telephone (309) 654-2241, Ext. 179

MONTH August 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1.	731	17.	754
2.	753	18.	755
3.	745	19.	713
4.	651	20.	764
5.	699	21	752
6.	723	22.	758
7.	752	23.	760
8.	753	24.	763
9.	759	25.	738
10.	745	26.	757
11.	757	27.	759
12.	618	28.	764
13.	748	29.	753
14.	117	30.	758
15.	354	31.	754
16.	619		

APPROVED

JUN 2 0 1976

O.C.O.S.R.

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.

957103

Docket No. 050-265

Unit Two

Date 9-5-79

POOR ORIGINAL

Completed by D. Hannum

Telephone (309) 654-2241, Ext. 179

MONTH August 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1.	474	17.	461
2.	487	18.	459
3.	478	19.	456
4.	480	20.	456
5.	477	21	449
6.	467	22.	450
7.	500	23.	448
8.	504	24.	449
9.	485	25.	437
10.	468	26.	450
11.	473	27.	439
12.	464	28.	437
13.	472	29.	418
14.	473	30.	435
15.	470	31.	427
16.	442		

APPROVED

JUN 2 0 1976

O.C.O.S.R.

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.

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APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13
Revision 5
March 1978

DOCKET NO. 050-254

UNIT NAME Quad Cities One

DATE 9-5-79

REPORT MONTH August

COMPLETED BY D. Hannum

TELEPHONE (309) 654-2241, Ext. 179

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
17	790804	F	--	H	NA	NA	NA	NA	Load was reduced for turbine testing and condensate demineralizer backwashing.
18	790812	F	--	H	NA	NA	NA	NA	Load was reduced to 500 MWe for main condenser flow reversal.
19	790814	F	22.8	A	3	NA	NA	NA	Unit One scrammed due to a loss of main condenser vacuum. Air ejectors were changed over, and no vacuum problems persisted during subsequent unit startup.

QTP 300-S13
Revision 5
March 1978

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-265

UNIT NAME Quad Cities Two

DATE 9-5-79

REPORT MONTH August

COMPLETED BY D. Hannum

TELEPHONE (309) 654-2241, Ext. 179

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
									None

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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 actuations during the reporting period.

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

There were no control rod drive scram timing exercises performed during the reporting period.

VII. 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-Efficientry 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 Permissable Concentration

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PCI	-	Primary Containment Isolation
SDC	-	Shutdown Cooling Mode of RHRS
LLRT	-	Local Leak Rate Testing
MAPLHGR	-	Maximum Average Planar Linear Heat Generation Rate
R.O.	-	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

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