QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

JANUARY 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

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I. INTRODUCTION

Quad-Cities Nuclear Power Station is composed of two Boiling Water Reactors, each with a Maximum Dependable Capacity of 769 MWe Net, located in Cordova, Illinois. The Station is jointly owned by Commonwealth Edison Company and Iowa-fliinois 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

January 1-10: Unit One began the month dropping load for a Drywell entry to determine the cause of excessive leakage in the Drywell. At 0045 hours on January 1, the unit held load at 320 MWe while Operating Department personnel entered the Drywell. At 0200 hours, a leak was located from an isolation valve on the bonnet leak-off line of the 1B Recirculation pump discharge valve and was repaired. At this time, the unit began a normal load increase to full power. At 0045 hours on January 8, the unit dropped load to 600 MWe to perform weekly Turbine tests and Control Rod Pattern adjustments. At 0600 hours, the Control Rod adjustments were completed, and a normal load increase was initiated.

January 11-20: At 0055 hours, on January 12, the unit dropped load to 700 MWe to perform weekly Turbine tests. At 0530 hours, testing was completed and the unit began a normal load increase. At 0001 hours on January 15, the unit dropped load to 700 MWe for Turbine tests. Following completion of the tests at 0215 hours, the unit began a normal load increase.

January 21-31: At 2100 hours, on January 21, the unit dropped load to 550 MWe to adjust the Control Rod Pattern. At 0100 hours, on January 22, the adjustments were completed and the unit began a normal load increase. At 0005 hours on January 29, the unit dropped load to 720 MWe for Turbine tests. At 0230 hours, the tests were completed and the unit began a normal load increase.

B. Unit Two

Unit Two remained shutdown throughout the month for End of Cycle Six Refueling and maintenance.

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

A. Amendments to Facility License or Technical Specifications

There were no Amendments to the Facility License or Technical Specifications during 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 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

			CAUSE	RESULTS & EFFECTS	
W.R.	LER		OF	ON	ACTION TAKEN TO
NUMBER	NUMBER	COMPONENT	MALFUNCTION	SAFE OPERATION	PREVENT REPETITION

There were no Safety Related Work Requests for Unit One for the reporting period.

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q31191	83-15/03L	Check Valve 2-1301- 41	Vavle seat wear.	Leakage thru valve was not excessive.	Valve seat was polished and gaskets were replaced the valve was successfully leak rate tested.
Q30850	83-18/01T	Reactor Water Clean∽up Elbow	Stress corrosion cracking.	The crack was not thru wall and thus did not leak. Any leakage would have been isolated by MO 2- 1201-2.	Elbow was cut out and replaced. It was then successfully hydro- static tested.
Q30186		Three RHR Service Water Vault Penetrations	Seal deteriora- tion.	None. Leaks were small. Vault's sumps would have removed any leakage.	The penetrations were repaired, and successfully leak rate tested.
031077	83-15/03L	MO 2-1301-17 Valve		Any leakage would have been controlled by in- line MO 2-1301-16 valve.	The valve's seat was cleaned, its disc was lapped, and the valve was successfully leak rate tested.

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

 License Event
 Date
 Title of Occurrence

There were no Licensee Event Reports for Unit One for the Reporting Period.

	UNIT TWO	
83-25/03L	12-29-83	RHR Service Water Vault Sump Check Valves Failed
84-01/03L	1-3-84	Reactor Scram While Shutdown
84-02-03L	1-6-84	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

DATEFebruary 7

COMPLETED BYAlex Misak

TELEPHONE309-654-2241x194

OPERATING STATUS

0000 010184

1. Reporting period: 2400 013184 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 Y	r, to Date	Cumulative
s.	Number of hours reactor was critical	744.0	744.0	84299.6
6.	Reactor reserve shutdown hours	0,0	0.0	3421.9
7.	Hours generator on line	744.0	744.0	81091.9
8.	Unit reserve shutdown hours.	0.0	0.0	909.2
9.	Gross thermal energy generated(MWH)	1763203	1763203	166869909
10.	Gross electrical energy generated(MWH)	584462	584462	53843078
ii .	Net electrical energy generated(MWH)	555374	555374	50161341
12.	Reactor service factor	100.0	100.0	82.0
13.	Reactor availability factor	100.0	100,0	85.3
i.4.	Unit service factor	100.0	100.0	78.9
1.5.	Unit availability factor	100.0	100.0	79.8
16.	Unit capacity factor (Using MDC)	97.1	97.1	63.5
17.	Unit capacity factor (Using Des.MWe)	94.6	94.6	61.8
18.	Unit forced outage rate	0.0	0.0	6.2
19.	Shutdowns scheduled over next 6 months	(Type,Date,an	d Duration	of each):

20. If shutdown at end of report period, estimated date of startup NA

#The MDC way 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_____TWD

DATEFebruary 7

COMPLETED BYAlex Misak

TELEPHONE309-654-2241x194

OPERATING STATUS

0000 010184

1. Reporting period: 2400 013184 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	.io Date	Cumulative
5.	Number of hours reactor was critical	0.0	0.0	77917.5
6.	Reactor reserve shutdown hours	0.0	0.0	2985.8
2.	Hours generator on line	0.0	0.0	75209.8
8.	Unit reserve shutdown hours.	0.0	0.0	702.9
9.	Gross thermal energy generated(MWH)	0	0	155382088
1 0.	Gross electrical energy generated(MWH)	0	0	49435780
11.	Net electrical energy generated(MWH)	-524	-524	46333536
12.	Reactor service factor	0.0	0.0	76.5
13.	Reactor availability factor	0,0	0.0	79,4
14.	Unit service factor	0.0	0.0	73.8
15.	Unit availability factor	0.0	0.0	74.5
16.	Unit capacity factor (Using MDC)	<u> </u>	1	59,1
17.	Unit capacity factor (Using Des.MWe)	1	i	57.6
18.	Unit forced outage rate	0.0	0.0	8.6
19.	Shutdowns scheduled over next 6 months	(Type,Date,and	Duration	of each):
20,	If shutdown at end of report period, es	timated date of	startup	2-16-84
The I	NDC may be lower than 769 NWe during periods of high ambient temp	erature due		

to the thermal performance of the spray canal.

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#UNOFFICIAL COMPANY NUMBERS ARE USED IN THIS REPORT

APPENDIX B AVERAGE DAILY UNIT POWER LEVEL

		DOCKET NO	50-254
		UNI	TONE
		DAT	EFebruary 7
		COMPLETED B	YAlex Misak
		TELEPHON	E309-654-2241x194
MONTHJ	lanuary 1984		
DAY AVERAGE	E DAILY POWER LEVEL (MWe-Net)	DAY AVERAGE	DAILY POWER LEVEL MWe-Net)
1.	559.8	17.	773.8
2.	710.8	18	772.0
3.	784.9	19.	773.7
4	783.1	20.	757.7
5	784.9	21.	747.0
6.	774.9	22.	552.6
7	791.4	23.	668.5
8	624.9	24.	763.6
9.	725.7	25.	776.9
i.0 .	775,4	26	786.1
11	784,8	27.	777.1
12.	747.8	28.	787.7
13	789.6	29.	747.2
14	780.9	30.	784.1
15.	765.8	31.	787.8
16.	780.8		

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 180% 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
ОНТН Ј	anuary 1984		
AY AVERAGE	DAILY POWER LEVEL MWe-Net)	DAY AVERAGE	DAILY POWER LEVEL We-Net)
1	-3.3	17.	-1.3
2.	-2.8	18	-6.3
3	-1.9	19.	-8.1
4.	-2,4	20.	-7.3
5	-3.0	21.	-6.6
6	-3.2	22.	-7,4
7	-3.0	23.	-7.4
8	-4.1	24.	-6.8
9	-4.3	25.	-7,4
0	-4.5	26.	-7.4
1	-4.4	27.	-6.8
2	-4,9	28.	-4,4
3.	-4.3	29.	-4.6
4.	-4,5	30.	-4.4
5.	-4.4	31.	-4,3
4	-8.6		

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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 DOCKET NO. 050-254					UNIT	APPE SHUTDOWNS A	NDIX D ND POWI	ER REDUCTIO	QTP 300-S13 NS Revision 6 August 1982
IT NAME	Quad-(Cities	Unit One						COMPLETED BY Alex Misak
TE	Februa	ary 6,	1984		REP	ORT MONTH JA	NUARY	1984	TELEPHONE 309-654-2241
NO.	DATE	TYPE F OR S	EURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
84-1	840108	S	0.0	В	5		RC	CONROD	Reduced load for Control Rod Pattern adjustment
84-2	840112	S	0.0	В	5		НА	XXXXXX	Reduced load to perform weekly Turbine tests
84-3	840115	S	0.0	В	5		HA	XXXXXX	Reduced load to perform weekly Turbine tests
84-4	840121	S	0.0	В	5		RC	CONROD	Reduced load for Control Rod Pattern adjustment
84-5	840129	S	0.0	В	5		HA	XXXXXX	Reduced load to perform weekly Turbine tests
1.1			1.1			1. C. A. Port			APPROVED
		1.	1.5.5			1.1.1.1.1.1.1	1		AUG 1 6 1982

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APPENDIX D UNIT SHUTDOWNS AND POWER REDUCTIONS OTP 300-S13 **Revision** 6 August 1982

050-265 DOCKET NO.

UNIT NAME

COMPLETED BY Alex Misak Quad-Cities Unit Two REPORT MONTH JANUARY 1984 February 6, 1984 309-654-2241 TELEPHONE DATE METHOD OF SHUTTING DOWN REACTOR COMPONENT CODE REASON TYPE OR S SYSTEM CODE LICENSEE EVENT **DURATION** 644 CORRECTIVE ACTIONS/COMMENTS (HOURE) REPORT NO. NO. DATE Unit Two remains shutdown for End of FUELXX 830904 744.0 C 4 RC 83-66 S Cycle Six Refueling and Maintenance APPROVED

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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 VAT "E OPERATIONS

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

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B. CONTROL ROD DRIVE SCRAM IMING 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.

QTP 300-S32 Revision 1 March 1978

QUAD-CITIES REFUELING INFORMATION REQUEST

1.	Unit:	Q1	Reload:7 C	ycle:	88
2.	Scheduled	date	for rext refueling shutdown:		3-11-84
3.	Scheduled	date	for restart following refueling	9:	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.
- Scheduled date(s) for submitting proposed licensing action and supporting information:

Technical Specification change will be submitted February 15, 1984.

- 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:
 - 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.
 - 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
ь.	Number of	assemblies	in	spent fuel	pool:	1730

- 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:
 - b. Planned increase in licensed storage:
- The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: 2003

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Q. C. O. S. R.

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QUAD-CITIES REFUELING INFORMATION REQUEST QTP 300-S32 Revision 1 March 1978

1.	Unit:	Q2	Reload:	6	Cycle:	7	
2.	Scheduled	date for ne	ext refueling	shutdown:		9-5-83	
3	Scheduled	date for re	start followi	no refuel	ina:	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)

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- 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.
 - 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
ь.	Number	of	assemblies	in	spent	fuel	pool:	412

 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
ь.	Planned increase in licensed storage:	0

 The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: 2003

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Q. C. O. S. R.

VIII. GLOSSARY

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

ACAD/CAM	42	Atmospheric Containment Atmospheric Dilution/Containment
ANOT		Atmospheric Monitoring
ANDI	Come	American National Standards Institute
AFRM	-	Average rower kange Monitor
AIWS	-	Anticipated Transient Without Scram
BWK		Bolling water Reactor
CRD	-	Control Kod Drive
FOF	-	Electro-Hydraulic Control System
CCED		Concreting Stations Empresses Dian
GOLF		High-Efficiency Portioulate Filter
HDCT		High Pressure Coolert Injection Sustem
UDCC		High Padiation Sampling System
TPCIPT		Integrated Drimary Containment Lock Date Test
TPULKI		Integrated Frimary Containment Leak Rate lest
Ter	-	Intermediate Range Monitor
IDI	-	Inservice Inspection
LEK	-	Licensee Event Report
LLRI	-	Local Leak Kate lest
LPCI	-	Low Pressure Coolant Injection Mode of KHRS
LPRM	-	Local Power Range Monitor
MAPLHGK	-	Maximum Average Flanar Linear Heat Generation Rate
MURCER	-	Minimum Gritical Power Ratio
MFLCPR	-	Maximum Fraction Limiting Critical Power Ratio
METU	1	Main Starm Teolation Valve
NIOCU		National Institute for Occupational Safety and Health
PCT		Primary Containment Teolation
PCTOMP		Preconditioning Interim Operating Management Recommendations
PRCCU	1.5	Perster Building Classed Cooling Mater System
RDCCW		Reactor building closed cooling water system
RDM	-	Rod Block Monitor
RUDC		Reactor Core Isolation Cooring System
RHRS	-	Residual Heat Kemoval System
RPS DLM	-	Reactor Protection System
CD CT C		Standby Cas Trastment System
SBUC		Standby Liquid Control
SDLC		Chutdam Cooling Made of PUPC
SDC	-	Shutdown Cooling Fode of KHKS
SDV	-	Scram Discharge Volume
TROCH	-	Turbing Ruilding Closed Cooling Mater Suster
THECOW	-	Termanalaa Taanaa Braha
TIP	-	Technical Support Contor
150	-	rechnical support Center



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Commonwealth Edison

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

NJK-84-43

February 1, 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 January 1984.

Very truly yours,

COMMONWEALTH EDISON COMPANY QUAD-CITIES NUCLEAR POWER STATION

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N. J. Kalivianakis Station Superintendent

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Enclosure

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