RAR-91-2

e your training

January 3, 1991

U. S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D. C. 20555

SUBJECT: Quad Cities Nuclear Station Units 1 and 2

Monthly Performance Report

NRC Docket Nos. 50-254 and 50-265

Enclosed for your information is the Monthly Performance Report covering the operation of Quad-Cities Nuclear Power Station, Units One and Two, during the month of December, 1990.

Respectfully,

COMMONWEALTH EDISON COMPANY QUAD-CITIES NUCLEAR POWER STATION

R. A. Rober

Technical Superintendent

RAR/LFH/klm

Enclosure

cc: A. B. Davis, Regional Administrator T. Taylor, Senior Resident Inspector

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QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

DECEMBER, 1990

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. F J-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-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 Lynne Hamilton and Karen McDearmon, telephone number 309-654-2241, extensions 2185 and 2240.

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II. SUMMARY OF OPERATING EXPERIENCE

A. Unit One

Unit One began the month of December with the continuation of the refuel outage. Reloading the core began in December and 477 bundles were installed. Normal refueling activities will continue into January 1991.

B. Unit Two

Unit Two began the month of December operating in Economic Generation Control (EGC). Normal operational activities were performed for the month of December. The unit remained in EGC or operated near full power with only two interruptions to perform routine work and testing. Those two interruptions are as follows: on the 8th of the month power was dropped to 310 MegaWatts Electric (MWE) for Stop Valve maintenance, and on the 29th power was dropped to 400 MWE to perform Monthly Stop Valve Closure Scram Function and 2C3 Heater Work.

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 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 major safety related maintenance performed on Units One and Two during the reporting period. This summary includes the following: Work Request Numbers, Licensee Event Report Numbers, Components, Cause of Malfunctions, Results and Effects on Safe Operation, and Action Taken to Prevent Repetition.

UNIT I MAINTENANCE SUMMARY

WORK REQUEST	SYSTEM	EID PESCRIPTION	WORK PERFORMED
Q88931	7300	Breaker, ACB Electric 480 VAC NEN #N003	As found: Breaker won't close probably due to lack of lubrication. As left: Lubed the reset spring bolt with mobil 28 and tested operable with breaker test device.

UNIT 2 MAINTENANCE SUMMARY

was then left as found and Tech Staff is to issue

a minor design change to add heat tracing.

WORK REQUEST	SYSTEM	EID DESCRIPTION	WORK PERFORMED
Q87160	2400	Controller Temp Ind H2-02 Monitor HT Tracing	As found: Heat trace circuit TLl will not maintain temperature at set point of 270 F/FIX. As left: Heat trace was operating all the time, but not reaching 280° to shut off. No physical problem was identified when testing individual components. The system

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.l. and 6.6.B.2. of the Technical Specifications.

UNIT 1

Licensee Event Report Number	Date	Title of Occurrence
90-25*	12/6/90	Group II Isolation Reactor Level Instrument Return to Service
90-26*	12/20/90	Control Room Isolation Due to Toxic Gas Concentration
90-32	12/24/90	A Fire Diesel Inop for Greater than 7 days
90-33	12/23/90	A SBGTS Auto-Start and RB Vents Isolated
90-34	12/23/90	Failure of Chlorine Monitor to Isolate Control Room Ventilation

UNIT 2

90-13	12/14/90	Torus Low Level
90-14	12/20/90	Torus Level Transmitter
90-15	12/21/90	HPCI Drain Pot Lines Outside FSAR

^{* 90-25} and 90-26 reports for the month of October have been downgraded

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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

ARRENDIA I OPERATING DATA REPORT

Docket No. 50-054
Unit Dee
Date January 3, 199
Completed By Lynne Mamilton
Telephone 309-634-1241

DEFENDING STORING

1. Respecting Parine 1800 123190 Gross Moune in Report Pariods 764

- Corrently Authorizes Power Level (Metri 251) May, Oppend, Capacity (Mise-Natic 265) Design Electrical Rating (Mise-Natic 259)
- 5. Power Lavel to Which Restricted (14 Any) (Mar-Ret): 5[4
- A. Respons For Restriction (If any);

	HTMON SINT	VR TO DATE	COMULATIVE
5) Sumber of Hours Reactor Was Critical		2518.1	
by Reactor Reserve Shutsown Hours		7.75	127749.5
7. Hours Generator Do Line 8. Unit Reserve Shotdown Mours			
t. Gross Thermal Energy Benerated (MWh)		17049079.0	
10. Sross Tientrical Energy Senerated (MWh)			88393954.0
III Net Electrical Energy Generated (Mon)		5772655.0	
12. Reactor Service Pactor		87.5	
15. Reactor Evallability Factor		83.5	67.2
14 Unit Service Factor			77.6
16. Unit Availability Factor			78-2
16. Unil Capacity Factor (Using MDC)		29.2	
[7] Unit Capacity Factor (Using Design Mis)			61.2
3%, Only Forced Dutage Rate		1,5	

- 19, Shutdown's Schedules Over News & Months (Type, Date, and Ouration of Each):
- 26 If What Down at Ere of Resert Period, Estimated Date of Startum

217 Usite	in Test Status (Prior to Doznarcia) Operation):	Forecast	
	Initial Electricity		

APPENDIX C

Docket No. 50-365 Uni: Two Date January 3, 0

Completes By Lynne Hemilton Telephone T09-694-1261

TREBUTING DISTATUS

1. Reporting Period 2400 127190 Grose Hours in Report Period: 744

- 2. Surrently Authorized Power Level (MM1): 2511 Mai. Depend. Separate (Mme-Net): 169 Design Electrical Rating (MMa-Net): 252
- 5. (Roman Leval to Which Restricted (17 Any) (Res-Net): N/A
- 4. Respons For Restriction 117 anyl-

	THIS MONTH	VA TO DATE	DUNEL ATTUE
5. Nieber of Hours Reactor Exa Critical	744.0	+304.6	125689.2
6. Reactor Reserve Bhutsown Mouns			2985.8
7/ Eburs Denerator On Line	744.0	6.53.5	122287.0
B. Unit Reserve Shutosun Hours			702.4
A. Gross Thermal Energy Semerated (MWh)	1732097.0	13934704.0	263231321.0
ID. Gross Electrical Energy Generated (MWh)	571514.0	4522123.0	84451207.0
11. Net Electrical Energy Senerated (MWh)	551643.0	4350903.0	7883055370
11. Reactor Service Factor		72.0	
13. Reactor Availability Factor		72.0	
14. Unit Service Factor		70.4	
15. Onit Availability Factor		70.4	75.7
16. Unit Capacity Factor (Using MDD)	76.5	34.4	65,4
17. Unit Capacity Factor (Using Design MWe)	94,5		62-7
16. Unit Forces Dutage Pate		1.4	7.8

(%) Englowers Scheduler Dvan Next & Months (Type, Date, and Duration of Each))

	ut Down at End of Report Parion, Enfinated Date of S	tertox	
21.	(a) Test Status (Prior to Connectal Operation):	Forecast	Achleves
	Scatter Criticality		-
	Initial Electricity		
	Consercial Operation		

APPENDIX B AVERAGE DATA VOLUME LEVEL

Docast No. 50-254 Unit One Date January I, 1992 Innolated By Lynna Healitan Telephone 309-254-2241

WINTH DECEMBER

DAY AVERAGE DAILY ADMER LEVEL (Mag-Net)	DAY AVERADE DAILY ACKER LE	
10 14 +0 10 +0 16 -0	30 -4 31 -49	

INSTRUCTIONS

On this form, list the everage daily unit power I well in Twe-hel for each day in the resorting month. Tomouta to the meanest while mecawatt.

These figures will do need to clot a graph for each reporting month. Note that when nazious decembed is capacity is used for the pet electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line for the restricted power level line.) In each cests, the average daily unit power output wheat enough be soptimized to a claim the apparant anomaly.

APPENDIX & AVERAGE DAILY NUMBER LEVEL

Ducket No. 80-165 Usit Nep Date Jenuary J. 1991 Empleted by Lynne Haeilton Telephone 309-694-2141

MONTH DECEMBER

TAY SVERAGE DAILY POWER LEVEL 1 723 1 749 2 753 1 753 1 18 747 3 778 4 750 5 774 5 774 6 8 793 7 747 8 8 793 7 747 8 8 22 746 7 747 8 8 25 745 9 751 9 752 1 745 1 745 1 747 1 747 1 747 2 758 1 747 2 758 1 748 2 758 2 745 3 778 1 747 2 778 3 745 4 750 5 745 5 7				
2 753 15 747 3 729 19 752 4 750 20 762 5 724 21 749 6 79% 22 744 7 747 22 747 8 626 29 759 9 751 25 745 10 745 25 745 11 742 27 277 12 750 28 260 23 755 29 465 14 776 30 764 13 755 29 465 14 776 30 764 25 765 31 765				
	2 753 3 729 4 750 5 724 6 795 7 747 8 626 7 741 10 745 11 742 42 750 13 755 14 776	18 18 20 21 22 23 24 25 24 27 28 29 39	747 752 742 748 749 747 759 745 779 277 280 463 764	

ZNSTRUCT LONS

On this form, list the average saily unit power level in the-Wet for each day in the reporting month. Doubute to the hearest whole negetett.

These figures will be used to plot a graph for each reporting conth. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be obtained when the paily average games layer exceeds the 100% line for the restricted power layer line). In such cases, the average daily unlit power butput sheet should be footnoted to explain the abstract angualy.

APPENDIX D UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO.

MO. DATE January 3, 1996 MO. DATE TYPE S DURATION REACTOR HOWTH DECEMBER, 1990 TYPE S DURATION REACTOR REACTOR SEASON REACTOR COORRECTIVE ACTIONS/COMMENTS SOURCE STATEM Unit One Shutdown for continuation of Cycle Eleven Refuel Outage.	UNIT NAME	Quad Ci	ties U	Quad Cities Unit One					COMPLETED BY Lynne Hamilton
DATE TYPE WEATTON WESTERN CORRECTIVE ACTIONS/COMPENT C	DATE	January	3,	96		REPO	Decembe	r. 1990	
S 744 C 2 RC FUELXX Unit One Shutdown for continuation Cycle Eleven Refuel Outage.	NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	SHUTTING	CODE	COMBONENT	CORRECTIVE ACTIONS/COMMENTS
		901201	vs	744		2		FUELXX	Ven Refuel Outage.

APPENDIX D UNIT SHUTDOWNS AND POWER REDUCTIONS

			NO.	DOCKET NO. UNIT NAME DATE
	902912	901208	STAG	Quad Ci
	S .	co	TYPE F OR S	265 ties
	17.49	4.45	DURATION (HOURS)	Unit Two
		Ç13	REASON	
-		4	METHOD OF SHUTTING DOWN REACTOR	REP
-1-		1 1 1	LICENSEE EVENT REPORT NO.	REPORT MONTH
-1-(final)		ì	SYSTEM	December, 1990
		l l l l	COMPONENT	1990
	Urit Two Power Reduction for 2C Heater Work, and Monthly Closure SCRAM Function	Unit Two Power Reduction for Stop Valve	CORRECTIVE ACTIONS/COMMENTS	COMPLETED BY Lyone Hamilton TELEPHONE 309-654-2241

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 for the reporting period.
- B. Control Rod Drive Scram Timing Data for Units One and Two

There were 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 300-532 Revision 2 October 1989

QUAD CITIES REFUELING INFORMATION REQUEST

1.	Unit: Q1	Reload:	10	Cycle:	_11		
2.	Scheduled date for nex	kt refuelin	ng shutdown:		11-12-90		
3.	Scheduled date for res	start follo	owing refueling:		1-28-91		
4. 5.	Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment: Yes, a proposed change to Technical Specification has been made to relax the Minimum Critical Power Ratio (MCPR) safety limit. This proposal is based on the Unit One Reload 11 Cycle 12 fuel loading, and has received approval. Scheduled date(s) for submitting proposed licensing action and supporting information:						
	AUGUST 31, 1990						
6.	Important licensing co or different fuel desi- analysis methods, sign procedures:	on or supp	lier unraulawa	A Marian av	· construences		
	NONE AT PRESENT TIME.						
	The number of fuel asse	emblies.					
	a. Number of assembli	les in core	1		724		
	b. Number of assembli	les in sper	it fuel pool:	14.0004.000	1681		
	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 c	apacity fo	r spent fuel:		2657		
	b. Planned increase i	n licensed	storage:		0		
	The projected date of t spent fuel pool assumin	he last re g the pres	fueling that ca ent licensed ca	n be dischapacity: 20	irged to the		

APPROVED OCT 3 0 1989

Q.C.O.S.R.

QTP 300-S32 Revision 2 October 1989

QUAD CITIES REFUELING INFORMATION REQUEST

1.	Unit: Q2	Reload:	10	Cycle: 11			
2.	Scheduled date f	or next refueling s	hutdown:	9-7-91			
3.	Scheduled date f	or restart followin	g refueling:	12-9-91			
4.	Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment: NOT AS YET DETERMINED.						
5.	Scheduled date(s) for submitting proposed licensing action and supporting information:						
	NOT AS YET DETER	MINED.					
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:						
	NONE AT PRESENT	TIME.					
7.	The number of fue	l assemblies.					
	a. Number of as	semblies in core:		724			
	b. Number of as	semblies in spent f	uel pool:	2011			
	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 sto	rage capacity for s	pent fuel:	3897			
	b. Planned incr	ease in licensed st	orage:	0			
	The projected dat spent fuel pool a	e of the last refue ssuming the present	ling that can be licensed capaci	discharged to the ty: 2008			

APPROVED OCT 3 0 1989 O.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

MFC - Maximum Permissible Concentration

MSIV - Main Steam Isolation Valve

NIOSH - National Institute for Occupational Safety and Health

PCI - Primary Containment Isolation

PCIOMR - Preconditioning Interim Operating Management Recommendations

RBCCW - Reactor Building Closed Cooling Water System

RBM - Rod Block Monitor

RCIC - leactor 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