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SVP-98-215

June 10, 1998

U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Attention:

Document Control Desk

Subject:

Quad Cities Nuclear Power Station Units 1 and 2

Monthly Performance Report

NRC Docket Numbers 50-254 and 50-265

Facility Operating License Numbers DPR-29 and DPR-30

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 May 1998.

If you have any questions concerning this letter, please contact Mr. Charles Peterson, Regulatory Affairs Manager, at (309) 654-2241, extension 3609.

Sincefely,

Joel P. Dimmette, Jr.

Site Vice President **Quad Cities Station** 

Attachment

CC:

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SVP Letter File

### QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

MAY 1998

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY 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
  - 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 and Steam Turbine/Generators, each with a Maximum Dependable Capacity of 769 MWe Net, located in Cordova, Illinois. The Station is jointly owned by Commonwealth Edison Company and MidAmerican Energy 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 i 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 Debra Kelley, telephone number 309-654-2241, extensions 3114 and 2240, respectively.

### II. SUMMARY OF OPERATING EXPERIENCE

### A. Unit One

Quad Cities Unit One was off-line the entire month of May, 1998 due to an unplanned extension of Maintenance Outage Q1P01. On May 31, 1993 at 3:20 a.m., Unit One commenced start-up activities with the pulling of rods and at 6:26 a.m. the reactor went critical. As of 4:30 p.m.on May 31, 1998 the unit was at 150 pounds of pressure and low pressure HPCI/RCIC runs were beginning.

### B. Unit Two

Quad Cities Unit Two began the month of May, 1998 shutdown due to an unplanned extension of Maintenance Outage Q2P01. On May 23, 1998 at 3:15 a.m., Unit Two commenced start-up activities with the pulling of rods and at 6:15 a.m. the reactor went critical. On May 26, 1998 at 2:45 a.m., Unit Two was synchronized to the grid. The Quad Cities Station Senior Management Review Board conducted collegial reviews at 40%, 60% and 90% power ascension hold points during start-up of Unit Two. Unit Two continued its ascent in power, reaching 98% power, 785 MWe at 4:30 p.m. on May 31, 1998.

# 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

  On March 31, 1998 the NRC issued to Quad Cities an exemption from the requirements of 10CFR70.24. The exemption was based on Quad Cities plant design for fuel storage, handling and use which precludes an accidental criticality event.
- C. Tests and Experiments Requiring NRC Approva!

  There were no Tests or Experiments requiring NRC approval for the reporting period.

# IV. LICENSEE EVENT REPORTS

The following is a tabular summary of all licensee event reports for Quad-Cities Units One and Two submitted during the reporting period.

# UNIT 1

Licensee Event Report Number	Submission Date	Title of Occurrence
98-16	5/11/98	Technical Specification Scram Discharge Volume Instrumer.ts Exceeded Setpoint Due to Insufficient Setpoint Margin as a Result of a Cognitive Engineering Error.
98-06, R1	5/29/98	Reactor Building (RB) Post Loss of Coolant Accident (LOCA) Temperatures are Higher Than Values Used for the Environmental Qualification of Electrical Equipment Due to Invalid Engineering Judgment, The Cause of Which Cannot Be Determined.
98-12, R1	5/29/98	The Unit One Reactor Bottom Head Drain Line Developed a Leak Due to Outside Diameter Initiated Stress Cracking When Surface Contaminants Were Inadvertently Introduced As a Result of an Isolated Inadequate Work Practice During Original Installation.

### UNIT 2

Licensee Event Report Number	Submission Date	Title of Occurrence
None.		

# V. DATA TABULATIONS

The following data tabulations are presented in this report:

- A. Average Daily Unit Power Level
- B. Operating Data Report
- C. Unit Shutdowns and Power Reductions

# APPENDIX B AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO 50-254

	UNIT One
	DATE June 10, 1998
	COMPLETED BY Lynne Hamilton
	TELEPHONE (309) 654-2241
MONTH May 1998	
DAY AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY AVERAGE DAILY POWER LEVEL (MWe-Net)
1	178
26	188
3	19 8
4	20
57	218
- 7	22
7	23
- 6	24
- 7	25
.06	269
1	27
2	288
.35	299
145	308
156	319
16 7	

### 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.

1.16-8

# APPENDIX B AVERAGE DAILY UNIT POWER LEVEL

MONTH May 1998	DOCKET NO 50-265  UNIT Two DATE June 10, 1998  COMPLETED BY Lynne Hamilton TELEPHONE (309) 654-2241
DAY AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY AVERAGE DAILY POWER LEVEL (MWe-Net)
1	17 8
2	188
3	198
4	208
5	218
6	228
7	238
86	24
9	25
10	26
11 5	27121
125	28313
135	29552
14	30. 603
15	31
16	

### 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 C

### OPERATING DATA REPORT

DOCKET NO. 50-254

UNIT One

DATE June 10, 1998

COMPLETED BY Lynne Hamilton

TELEPHONE (309) 654-2241

### **OPERATING STATUS**

0000 050198

- 1. REPORTING PERIOD: 2400 053198 GROSS HOURS IN REPORTING PERIOD: 744
- CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2511 MAX > DEPEND > CAPACITY: 769
   DESIGN ELECTRICAL RATING (MWe-NET): 789
- 3. POWER LEVEL TO WHICH RESTRICTED (IF ANY) (MWe-Net): N/A
- 4. REASONS FOR RESTRICTION (IF ANY):

	THIS MONTH	YR TO DATE	CUMULATIVE
5. NUMBER OF HOURS REACTOR WAS CRITICAL	17.40	17.40	172392.80
o. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	3421.90
7. HOURS GENERATOR ON LINE	0.00	0.00	167295.30
8. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	909.20
9. GROSS THERMAL ENERGY GENERATED (MWH)	0.00	0.00	365437242.60
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	0.00	0.00	118253369.00
11. NET ELECTRICAL ENERGY GENERATED (MWH)	0.00	0.00	106154969.00
12. REACTUR SERVICE FACTOR	2.34	0.48	75.25
13. REACTOR AVAILABILITY FACTOR	2.34	0.48	76.74
14. UNIT SERVICE FACTOR	0.00	0.00	73.02
15. UNIT AVAILABILITY FACTOR	0.00	0.00	73.42
16. UNIT CAPACITY FACTOR (Using MDC)	0.00	0.00	60.25
17. UNIT CAPACITY FACTOR (Using Design MWe)	0.00	0.00	58.73
18. UNIT FORCED OUTAGE RATE	0.00	0.01	7.19

- 19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTES (TYPE, DATE, AND DURATION OF EACH): Refuel, 11/07/98, 40 days
- 20. IF SHUTDOWN AT END OF REPORT PERIOD < ESTIMATED DATE OF STARTUP: N/A
- 21. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION): N/A

	FORECAST	ACHIEVED	
INITIAL CRITICALITY			
INITIAL ELECTRICITY			
COMMERCIAL OPERATION			

### APPENDIX C

### OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT Two

DATE June 10, 1998

COMPLETED BY Lynne Hamilton

TELEPHONE (309) 654-2241

### **OPERATING STATUS**

0000 050198

- 1. REPORTING PERIOD: 2400 053198 GROSS HOURS IN REPORTING PERIOD: 744
- 2. CURRENTLY AUTHORIZED POWER LEVEL (MWt): 2511 MAX > DEPEND > CAPACITY: 769 DESIGN ELECTRICAL RATING (MWe-NET): 789
- 3. POWER LEVEL TO WHICH RESTRICTED (IF ANY) (MWe-Net): N/A
- 4. REASONS FOR RESTRICTION (IF ANY):

	THIS MONTH	YR TO DATE	CUMULATIVE
5. NUMBER OF HOURS REACTOR WAS CRITICAL	209.75	209.75	164576.80
6. REACTOR RESERVE SHUTDOWN HOURS	0.00	0.00	2985.80
7. HOURS GENERATOR ON LINE	141.30	141.30	160111.15
8. UNIT RESERVE SHUTDOWN HOURS	0.00	0.00	702.90
9. GROSS THERMAL ENERGY GENERATED (MWH)	218539.20	218539.20	348574795.52
10. GROSS ELECTRICAL ENERGY GENERATED (MWH)	62014.00	62014.00	111824558.00
11. NET ELECTRICAL ENERGY GENERATED (MWH)	54108.00	54108.00	106001566.00
12. REACTOR SERVICE FACTOR	28.19	5.79	72.33
13. REACTOR AVAILABILITY FACTOR	28.19	5.79	73.64
14. UNIT SERVICE FACTOR	18.99	3.90	70.37
15. UNIT AVAILABILITY FACTOR	18.99	3. 10	70.68
16. UNIT CAPACITY FACTOR (Using MDC)	9.46	1.94	60.58
17. UNIT CAPACITY FACTOR (Using Design MWe)	9.22	1.89	59.04
18. UNIT FORCED CUTAGE RATE	0.00	0.00	11.18

- 19. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE, AND DURATION OF EACH): None
- 20. IF SHUTDOWN AT END OF REPORT PERIOD < ESTIMATED DATE OF STARTUP: N/A
- 21. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION): N/A

	FORECAST	ACHIEVED	
INITIAL CRITICALITY			271 August
INITIAL ELECTRICITY			
COMMERCIAL OPERATION			

# APPENDIX D UNIT SHUTDOWNS AND POWER REDUCTIONS

UNIT NAME One COMPLETED BY Lynne Hamilton

DATE June 10, 1998 REPORT MONTH May, 1998 TELEPHONE 309-654-2241

					,	May, 1990			TELEPHONE 309-654-2241
NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT	SYSTEM	COMPONENT	CORRECTIVE ACTIONS/COMMENTS
98-02	980501	S	744.0	В	4				Continuation of Maintenance Outage Q1P01 (Unplanned Extension).
									(emplatined Extension).
								~ ~ ~	
***************************************									The contract the second contract contra
	PIA METORA METORA DE PROPERTA BERNALANA								
		-							
		-							

# APPENDIX D UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET UNIT NO DATE	AME Two		1998 F	REPOR	T MONTH	May, 1998			COMPLETED BY Lynne Hamilton TELEPHONE 309-654-2241
NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT	SYSTEM	COMPONENT	CORRECTIVE ACTIONS/COMMENTS
98-01	980501	S	602.7	В	4				Continuation of Maintenance Outage Q2P01 (Unplanned Extension).
							-		
									The state of the s
					L-				
			Assessment						
			****************						

### 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.

Unit: Two	Date: May 24, 1998
Valve Actuated:	No. & Type of Actuation:
2-0203-3A 2-0203-3B 2-0203-3C 2-0203-3D	1 Manual 1 Manual 3 Manual (Note 1) 1 Manual
2-0203-3E	3 Manual (Note 1)

Plant Conditions: Reactor Pressure - 320 psig

<u>Description of Events:</u> QCOS 0203-03 "Main Steam Relief Valves Operability Test"

### Note 1:

- The second test of 2-0203-3C was performed due to a burned out closed light bulb on panel 902-3. This second test proved the valve worked properly. The third test of 2-0203-3C was performed in conjunction with the investigation of 2-0203-3E PORV stroke times in a comparison of valve timing.
- The first test of the 2-0703-3E showed the closed stroke time of the valve was outside the In-Service Testing timing criteria. The second test of 2-0203-3E was to confirm the closed stroked time of the PORV was outside the IST timing criteria as allowed by the code. The third test of the 2-0203-3E was conducted in conjunction with the investigation of the stroke times by PIF Q1998-02632.

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

The basis for reporting this data to the Nuclear Regulatory Commission is 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 05/01/98 TO 05/31/98

		AVERA	AVERAGE TIME IN SECONDS AT & INSERTED FROM FULLY WITHDRAWN	N SECONDS AT & FULLY WITHDRAW	AT &	MAX. TIME FOR 90%	DESCRIPTION
	NUMBER	2	20	50	06		Technical Specification 3.3.C.1 &
DATE	OF RODS	0.375	0.900	2.00	3.5	1 7 sec.	3.3.C.2 (Average Scram Insertior Time)
980527	177	0.29	0.67	1.44	2.53	00 E	greater than 120 days. Unit Two

# 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 0300-S32 Revision 3 April 1997

# QUAD CITIES REFUELING INFORMATION REQUEST

1.	Unit: Q1 Reload: 14	Cycle: 15		
2.	Scheduled date for next refueling shutdown:	11/07/98		
3.	Scheduled date for restart following refueling:	12/17/98		
4.	Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment:			
	Yes			
5.	Scheduled date(s) for submitting proposed licensisupporting information:	ng action and		
	Approved			
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:			
	Approx. 216 SPC 9X9IX Fuel Bundles will be loaded.			
7.	The number of fuel assemblies.			
	a. Number of assemblies in core:	724		
	b. Number of assemblies in spent fuel pool:	1933		
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:	2002		

### QUAD CITIES REFUELING INFORMATION REQUEST

1.	Unit: Q2 Reload: 14	Cycle: 15		
2.	Scheduled date for next refueling shutdown:	1/8/2000		
3.	Scheduled date for restart following refueling:	2/17/2000		
4.	Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment:			
	Yes			
5.	Scheduled date(s) for submitting proposed licensing action and supporting information:			
	August, 1999 ***			
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:			
	N/A			
7.	The number of fuel assemblies.			
	a. Number of assemblies in core:	1.4		
	b. Number of assemblies in spent fuel pool:	2943		
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:	2002		

### VIII. GLOSSARY

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

ACAD/CAM - Armospheric Containment Atmospheric Dilution/Containment Atmospheric Monitoring ANSI - American National Standards Institute APRM - Average Power Range Monitor ATWS - Anticipated Transient Without Scram - Boiling Water Reactor BWR CRD - Control Rod Drive EHC - Electro-Hydraulic Control System EOF - Emergency Operations Facility GSEP - Generating Stations Emergency Plan - High-Efficiency Particulate Filter HEPA 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 - Maximum Fraction Limiting Critical Power Ratio MPC - Maximum Permissible Concentration MSIV - Main Steam Isolation Valve NIOSH - National Institute for Occupational Safety and Health - Primary Containment Isolation PCIOMR - 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 SEM - Source Range Monitor TBCCW - Turbine Building Closed Cooling Water System TIP - Traversing Incore Probe

TSC - Technical Support Center