

RAR-91-2

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. Robey*

R. A. Robey  
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. 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-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

<u>WORK REQUEST</u>	<u>SYSTEM</u>	<u>EID DESCRIPTION</u>	<u>WORK PERFORMED</u>
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

<u>WORK REQUEST</u>	<u>SYSTEM</u>	<u>EID DESCRIPTION</u>	<u>WORK PERFORMED</u>
Q87160	2400	Controller Temp Ind H2-02 Monitor HT Tracing	As found: Heat trace circuit T11 will not maintain temperature at set point of 270 F/FIX. As left: Heat trace was operating all the time, but not reaching 280 <sup>o</sup> to shut off. No physical problem was identified when testing individual components. The system was then left as found and Tech Staff is to issue a minor design change to add heat tracing.



#### 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 1

<u>Licensee Event Report Number</u>	<u>Date</u>	<u>Title of Occurrence</u>
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







APPENDIX E  
AVERAGE DAILY UNIT POWER LEVEL

Socket No. 30-265  
Unit Two  
Date January 3, 1991  
Completed By Lynne Hamilton  
Telephone 309-654-2141

MONTH DECEMBER

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	733	17	746
2	753	18	747
3	739	19	752
4	750	20	762
5	724	21	749
6	793	22	744
7	747	23	767
8	626	24	739
9	751	25	745
10	745	26	779
11	742	27	777
12	750	28	760
13	755	29	663
14	776	30	794
15	757	31	765
16	740		

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 D  
UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-254

UNIT NAME Quad Cities Unit One

DATE January 3, 1996

REPORT MONTH December, 1990

COMPLETED BY Lynne Hamilton

TELEPHONE 309-654-2241

NO.	DATE	TYPE P OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
	901201	S	744	C	Z	- - -	RC	FUELXX	Unit One Shutdown for continuation of Cycle Eleven Refuel Outage.

APPENDIX D  
UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-265  
 UNIT NAME Quad Cities Unit Two  
 DATE January 3, 1990

REPORT MONTH December, 1990  
 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 NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
901208		S	4.45	B	4	- - - -	- -	- - - -	Unit Two Power Reduction for Stop Valve Maintenance
902912		S	17.49	B	4	- - - -	- -	- - - -	Unit Two Power Reduction for 2C Heater Work, and Monthly Closure SCRAM Function



## 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.

QUAD CITIES REFUELING  
INFORMATION REQUEST

QTP 300-532  
Revision 2  
October 1989

1. Unit: Q1 Reload: 10 Cycle: 11
2. Scheduled date for next refueling shutdown: 11-12-90
3. Scheduled date for restart following refueling: 1-28-91
4. 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.
5. Scheduled date(s) for submitting proposed licensing action and supporting information:  
  
AUGUST 31, 1990
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 fuel assemblies.
  - a. Number of assemblies in core: 724
  - b. Number of assemblies in spent fuel pool: 1681
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: 2657
  - 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: 2008

QUAD CITIES REFUELING  
INFORMATION REQUEST

QTP 300-532  
Revision 2  
October 1989

1. Unit: Q2 Reload: 10 Cycle: 11
2. Scheduled date for next refueling shutdown: 9-7-91
3. Scheduled date for restart following 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 DETERMINED.
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 fuel assemblies.
  - a. Number of assemblies in core: 724
  - b. Number of assemblies in spent fuel pool: 2011
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: 2008

## 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	- 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
SRM	- Source Range Monitor
TBCCW	- Turbine Building Closed Cooling Water System
TIP	- Traversing Incore Probe
TSC	- Technical Support Center

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