

QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

MAY 1981

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 AND 50-265

LICENSE NOS. DPR-29 AND DPR-30

8106160543

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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 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 Becky Brown and Robert Tubbs, telephone number 309-654-2241, extensions 245 and 174.

## II. SUMMARY OF OPERATING EXPERIENCE

### A. UNIT ONE

May 1-9: Unit One began the reporting period holding a load of 815 MWe. Over these initial nine days, an average load of 814 MWe was held, except on May 3. On that day load was dropped to 700 MWe for the weekly turbine test. After the tests were completed, load was held for an additional three hours, per the Load Dispatcher, resulting in a load of 768 MWe for the day.

May 10-12: On May 3 at 2330, load was dropped at 100 MWe/hour to perform the weekly turbine tests. At 2335, an alarm for the B Recirc Pump Motor Lower Lube Oil Hi/Lo Level was received. Seven Hundred MWe was reached and held at 0035 on May 10 and the tests were completed at 0145. Load was held at 700 MWe until 0515. At that time load was increased at various rates until 0800 when it was dropped back to 400 MWe at a rate of 100 MWe/hour. The Drywell was deinerted and an entry was made to add oil to the Recirc Pump Motor Lower Bearing in both loops. At 1415 load was increased at 100 MWe/hour for two hours, then at 5 MWe/hour until 0700 on May 12. The resulting daily average load for May 10, 11, and 12 was 614, 735 and 809 MWe, respectively.

May 13-21: With the exception of May 17, load was held at an average of 809 MWe. On May 17 a load of 708 MWe was achieved due to performance of the weekly turbine tests and load reductions per the Load Dispatcher's request.

May 22-27: Load was held at 812 MWe on May 22 until 1900, when it was dropped in preparation for a Maintenance Outage to repair a leaking seal ring on 1A Feedwater Check Valve. The Unit was tripped off-line at 2337 and the reactor was manually scrammed at 0050 on May 23. Other work items performed during this outage were: 1A and 1B Recirc MG Sets were rebrushed, Pilot Valves were replaced in B, C, D, and E Electromatic Relief Valves, and miscellaneous valves were repaired.

The reactor was pulled critical at 2003 on May 24, and the generator was put on line at 0349 on May 25. Load was increased until 0500, when it was held at 230 MWe to perform scram timing on 88 control rods. At 1100 load was increased to 400 MWe and special rods maneuvers were performed for the Nuclear Engineer. Load was then increased to 500 MWe for a Xenon soak. At 1130 on May 26 load was increased at various rates until it was held at 2400 on May 27.

May 28-31: On May 28 load was held at 803 MWe. At 0145, on May 29, load was dropped to 750 MWe to switch reactor feed pumps and was then increased to 807 MWe at 0921. Load was held until 0430 on May 31. At that time load was dropped to 700 MWe to perform the weekly turbine tests, however, the Load Dispatcher requested that the Unit drop to 650 MWe. Load was held until 0615 when it was then increased at various rates until 804 MWe was reached and held. The Unit ended the reporting period in that state.

## B. UNIT TWO

May 1-8: Unit Two began the reporting period holding a load of 783 MWe. Although load was held, with the exception of weekly turbine tests on May 2, the average load was 766 MWe. This gradual drop in maximum load is attributed to a limiting control rod pattern.

May 9-11: At 0000 on May 9, load was dropped to 600 MWe to perform rod moves for the Nuclear Engineer. Load was increased at 5 MWe/hour until 2100 on May 10. On May 10 the coastdown for End of Cycle Five began. At 2220 the 2E condensate demineralizer was taken out of service due to high post strainer D.P. This necessitated dropping load on May 11 to backwash and precoat 2G and 2F demineralizers. The average daily load for May 9, 10, and 11 was 648, 755, and 762 MWe.

May 12-15: Load was held over this four day period at an average of 761 MWe. Operational occurrences during this period included restoration of the 2E condensate demineralizer on May 12.

May 16-20: On May 16 load was dropped for the weekly turbine tests, then held an additional four hours for the Load Dispatcher. Load was again dropped for the Load Dispatcher on May 17 for four and one half hours. The resulting daily average load was 729 MWe on May 16, and 705 MWe on May 17. On May 18, 19, and 20 load was held at an average of 746 MWe.

May 21-22: On both of these days the Load Dispatcher requested load to be dropped for three and one half hours each day. The resulting daily average loads were 709 and 719 for May 21 and 22 respectively.

May 23-27: Load was held for this five day period with the exception of the weekly turbine tests on May 24. However, due to deratings, the tests had little effect on load. The average load over this period was 718 MWe.

May 28-31: On May 28, at 0115, load was reduced to 550 MWe at the request of the Load Dispatcher. Load was later increased, starting at 0600, at various rates until it was held at 1445. The average load for the day was 666 MWe. Load was held on May 29. However, due to all lift pumps tripping off at 0930, and the plant going on full river operation, a large rise in power occurred due to the using of the cooler river water. The average load for the day was 712 MWe. On May 30 at 0030, power was dropped to 500 MWe for the Nuclear Engineer. At this time the turbine weekly tests were performed and condenser flow was reversed. At 0335 load was increased at 5 MWe/hour. The load increase continued through May 31 and the Unit ended the reporting period at 745 MWe and increasing at 5 MWe/hour.



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

#### A. Amendments to Facility License or Technical Specifications

On April 16, 1981, Amendments 66 and 60 were issued to DPR-29 and DPR-30 respectively. These Amendments consist of changes in the Technical Specifications for each of the two units which change setpoints for certain system settings. These changed setpoints are for: 1) Turbine Condenser Low Vacuum Scram; 2) Main Steamline Low Pressure Isolation; 3) Main Steamline High Flow Isolation; 4) ECCS-ADS interlock, and 5) ECCS Fill System High Pressure Alarm. These changes in instrument and system setpoint have been made to reduce the number of nuisance alarms and spurious trips caused by setpoint drift.

On April 20, 1981, Amendments 67 and 61 were issued to DPR-29 and DPR-30 respectively. These Amendments eliminate the requirement to reduce reactor power to below 50 percent of rated power when the main steam isolation valve closure time verification is performed.

On April 20, 1981, Amendments 68 and 62 were issued to DPR-29 and DPR-30 respectively. These Amendments eliminate the requirement for continuous monitoring of the primary containment inerting system make-up as a means of monitoring the containment for gross leakage.

On April 24, 1981, Amendments 69 and 63 were issued to DPR-29 and DPR-30 respectively. These Amendments remove reactor water cleanup isolation valve M0-1201-80 from Table 3.7-1 of the Technical Specifications and excludes the valve from the surveillance requirement described in Section 4.7.D.

On May 13, 1981, Amendment 71 was issued to DPR-29. This Amendment extends the MAPLHGR curve for a mixed-oxide fuel bundle to 50,000 MWD/ST planar average exposure. This will enable the completion of a high burnup fuel experiment in the present core.

#### 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 and Experiments Requiring NRC approval for the reporting period.

D. 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
Q12240		1/2 Diesel Generator	The field flash relay was sticking closed.	The field ground alarm came up. Diesel Generator operability was not affected.	Lubricated the field flash contactor; tested operable.
Q12159		1-1C01-65C 1C RHR Service Water Pump	The pump internals were worn.	The pump had high bearing vibration. The other three RHR Service Water Pumps were operable.	Replaced shaft sleeves, bearings, seal and balanced impeller.
Q12192		1B RHR Pump	Mechanical seal on pump shaft was worn.	Water was leaking from the seal. The pump was operable.	Changed cartridge--type mechanical seal.
Q12191		1A-1002 RHR Pump	Seal was worn.	Water was leaking from the seal. The pump was operable.	Replaced mechanical seal and broken stud.
Q12193		1D-1002 RHR Pump	Seal was worn.	Water was leaking from the seal. The pump was operable.	Replaced mechanical seal.
Q12648		1-302-19A Back-up Scram Solenoid Valve	Wire had pulled loose from the coil leads.	The solenoid did not energize when voltage was applied to it, during initial testing. The RPS system was fully operable.	Found wire on coil pulled out of wire nut. Reconnected lead with wire nut.

UNIT ONE MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q12518		1-220-62A Feed- water Check Valve	Steam leak in pressure seal ring.	Steam was leaking in the MSIV room. No abnormal release of radioactive material to the environs occurred.	Replaced pressure seal ring and installed new "tie" wire on hold down bolts for trim.
Q11606		M0-1-202-5A	Control circuit cable has shorted wires--5 conduc- tor cable #12507.	Old cable had been spliced as a temporary fix. The valve was fully operable.	Replaced cable from operator to Drywell penetration--verified pump trips on valve closure.
Q11421		1-1001-19A RHR System Crosstie Valve	The auxiliary contacts were sticky.	The valve would not close from the control switch. Failure was in the safe direction; LPCI operability was not affected.	Replaced auxiliary contacts on circuit breaker.
Q12651		1-2001-16	The air cylinder was worn causing air to leak by the piston.	The valve would not open completely. The isolation capability was not affected.	Replaced air cylinder on valve operator.

UNIT TWO MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q11701	81-07/03L	A0-2-203-2A--2A Outboard MSIV	There was a steam leak in the vicinity of the limit switch from the RCIC testable check valve.	Failed to get 1/2 scram during testing. The other MSIVs functioned as designed.	Initially the 10 percent closed switch was exercised and it worked satisfactorily. Then during the short outage, the limit switch assembly was changed.
Q10879		IRM Number 17	The detector was failed.	IRM was failed down-scale. The other IRMs in that channel were operable.	Replaced detector and checked connectors.
Q12314		2-1001-18A RHR Minimum Flow Valve	The pressure switch was out of calibration.	The valve did not automatically open during the flow test. LPCI was operable.	Calibrated pressure switch PS-1-1001-81A.
Q12313		2-1001-18B RHR Minimum Flow Valve	The pressure switch was out of calibration.	The valve did not automatically open during the flow test. LPCI was operable.	Calibrated pressure switch PS-1-1001-81B.
Q12209		2A RHR Pump	The mechanical seal was worn.	Water was leaking from the seal. The pump was operable.	Changed mechanical seal.
Q12210		2B RHR Pump	The mechanical seal was worn.	Water was leaking from the seal. The pump was operable.	Changed mechanical seal.

UNIT TWO MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q12211		2C RHR Pump	The mechanical seal was worn.	Water was leaking from the seal. The pump was operable.	Changed mechanical seal.
Q12546		Unit 2 Diesel Generator Voltage Regulator	A voltage control rectifier burnt out.	Lost voltage control to the generator. The 1/2 Diesel Generator and associated ECCS components and containment cooling mode of RHR were demonstrated operable. Two off-site lines capable of supplying 345 KV power were available.	Replaced rectifier.
Q12549	81-12/03L	M0-2-1001-7B RHR Pump Suction Valve	The circuit breaker auxiliary contacts were sticking.	The valve would not open from the Control Room. LPCI and containment cooling modes of RHRS were still operable.	Replaced auxiliary contacts on circuit breaker.
Q12519	81-10/03L	Unit 2 Diesel Generator	Spurious breaker closure caused the generator to motorize, burning some wiring and potential transformers.	The 1/2 Diesel Generator was operable. Two off-site lines supplying 345 KV power were available. The low pressure ECCS and containment cooling modes of RHR associated with the operable Diesel Generator were proven operable.	Replaced 4 wires in cubicle 1, Bus 24-1. Replaced wiring and potential transformers in generator.

UNIT TWO MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q12635		2-2001-16 Drywell Equipment Drain Sump Discharge Valve	Air cylinder was worn, causing sluggish operation.	Valve would not open from the Control Room. The valve failed on the isolated condition. The redundant isolation valve was fully operable.	Replaced air cylinder on operator.

#### 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

<u>Licensee Event Number</u>	<u>Date</u>	<u>Title of Occurrence</u>
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There were no Licensee Event Reports for the reporting period for Unit One

##### UNIT TWO

81-9/03L	5-4-81	M0-2-1001-37B Breaker tripped.
81-10/03L	5-15-81	Unit Two Diesel Generator Inoperable
81-12/03L	5-18-81	M0-2-1001-7B RHRS Valve failed to open



## 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

DATE June 1 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241X174

## OPERATING STATUS

0000 050181

1. Reporting period: 2400 053181 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	<u>700.8</u>	<u>3410.8</u>	<u>64117.1</u>
6. Reactor reserve shutdown hours	<u>0.0</u>	<u>0.0</u>	<u>3421.9</u>
7. Hours generator on line	<u>691.8</u>	<u>3347.8</u>	<u>61231.3</u>
8. Unit reserve shutdown hours.	<u>0.0</u>	<u>0.0</u>	<u>907.2</u>
9. Gross thermal energy generated (MWH)	<u>1622874</u>	<u>7770335</u>	<u>124012423</u>
10. Gross electrical energy generated (MWH)	<u>530156</u>	<u>2554270</u>	<u>39933177</u>
11. Net electrical energy generated (MWH)	<u>492672</u>	<u>2378914</u>	<u>37236193</u>
12. Reactor service factor	<u>94.2</u>	<u>94.1</u>	<u>80.8</u>
13. Reactor availability factor	<u>94.2</u>	<u>94.1</u>	<u>85.1</u>
14. Unit service factor	<u>93.0</u>	<u>92.4</u>	<u>77.1</u>
15. Unit availability factor	<u>93.0</u>	<u>92.4</u>	<u>78.3</u>
16. Unit capacity factor (Using MDC)	<u>86.1</u>	<u>85.4</u>	<u>61.0</u>
17. Unit capacity factor (Using Des. MWe)	<u>83.9</u>	<u>83.2</u>	<u>59.4</u>
18. Unit forced outage rate	<u>0.0</u>	<u>1.8</u>	<u>7.5</u>

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 ambient temperature due to the thermal performance of the spray canal.

# OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT TWO

DATE June 1 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241X174

## OPERATING STATUS

0000 050181

1. Reporting period: 2400 053181 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	<u>744.0</u>	<u>3527.6</u>	<u>62360.4</u>
6. Reactor reserve shutdown hours	<u>0.0</u>	<u>0.0</u>	<u>2985.0</u>
7. Hours generator on line	<u>744.0</u>	<u>3501.8</u>	<u>59783.0</u>
8. Unit reserve shutdown hours.	<u>0.0</u>	<u>0.0</u>	<u>702.9</u>
9. Gross thermal energy generated (MWH)	<u>1701924</u>	<u>8138137</u>	<u>123338545</u>
10. Gross electrical energy generated (MWH)	<u>543830</u>	<u>2591717</u>	<u>39313268</u>
11. Net electrical energy generated (MWH)	<u>519000</u>	<u>2459614</u>	<u>36816566</u>
12. Reactor service factor	<u>100.0</u>	<u>97.4</u>	<u>79.5</u>
13. Reactor availability factor	<u>100.0</u>	<u>97.4</u>	<u>83.3</u>
14. Unit service factor	<u>100.0</u>	<u>96.7</u>	<u>76.2</u>
15. Unit availability factor	<u>100.0</u>	<u>96.7</u>	<u>77.1</u>
16. Unit capacity factor (Using MDC)	<u>90.7</u>	<u>88.3</u>	<u>61.0</u>
17. Unit capacity factor (Using Des. MWe)	<u>88.4</u>	<u>86.0</u>	<u>59.5</u>
18. Unit forced outage rate	<u>0.0</u>	<u>1.4</u>	<u>8.7</u>

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 ambient temperature due to the thermal performance of the spray canal.

APPENDIX B  
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-254

UNIT ONE

DATE June 1 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241X174

MONTH May 1981

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1.	<u>762.0</u>
2.	<u>757.8</u>
3.	<u>717.5</u>
4.	<u>753.6</u>
5.	<u>756.0</u>
6.	<u>765.0</u>
7.	<u>760.2</u>
8.	<u>765.0</u>
9.	<u>762.1</u>
10.	<u>567.4</u>
11.	<u>682.4</u>
12.	<u>754.5</u>
13.	<u>760.7</u>
14.	<u>754.0</u>
15.	<u>756.6</u>
16.	<u>748.8</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17.	<u>659.0</u>
18.	<u>754.6</u>
19.	<u>756.7</u>
20.	<u>756.0</u>
21.	<u>764.4</u>
22.	<u>666.8</u>
23.	<u>-31.6</u>
24.	<u>-26.6</u>
25.	<u>269.0</u>
26.	<u>497.4</u>
27.	<u>667.8</u>
28.	<u>772.9</u>
29.	<u>732.4</u>
30.	<u>747.3</u>
31.	<u>718.3</u>

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 B  
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-265

UNIT TWO

DATE June 1 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241X174

MONTH May 1981

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1.	<u>755.4</u>
2.	<u>730.4</u>
3.	<u>739.0</u>
4.	<u>734.4</u>
5.	<u>725.7</u>
6.	<u>728.5</u>
7.	<u>720.3</u>
8.	<u>720.2</u>
9.	<u>616.8</u>
10.	<u>721.7</u>
11.	<u>727.3</u>
12.	<u>731.1</u>
13.	<u>732.9</u>
14.	<u>721.4</u>
15.	<u>719.8</u>
16.	<u>696.1</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17.	<u>672.6</u>
18.	<u>727.8</u>
19.	<u>710.1</u>
20.	<u>698.8</u>
21.	<u>676.4</u>
22.	<u>685.9</u>
23.	<u>686.3</u>
24.	<u>690.7</u>
25.	<u>692.3</u>
26.	<u>678.5</u>
27.	<u>675.2</u>
28.	<u>655.0</u>
29.	<u>658.5</u>
30.	<u>543.8</u>
31.	<u>652.4</u>

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

QTP 300-513  
Revision 5  
March 1978

DOCKET NO. 50-254

UNIT NAME Quad-Cities Unit One

DATE June 1, 1981

REPORT MONTH MAY 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241,  
ext. 174

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LIC EV. REPORT	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
81-9	810510	F	0.0	B	5		CB	MOTORX	Load reduction to add oil to Recirculation Pump Motor Bearings
81-10	810522	S	52.2	B	2		ZZ	ZZZZZZ	Maintenance Outage to repair leaking seal on Feedwater Check. Other items worked included: electromatic pilot valves, MG set brushes and scram timing during ascension



APPENDIX D  
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-513  
Revision 5  
March 1978

DOCKET NO. 50-265

UNIT NAME Quad-Cities Unit Two

DATE June 1, 1981

REPORT MONTH MAY 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241,  
ext. 174

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
81-10	810509	S	0.0	B/H	5		RB	CONROD	Load reduction to perform Turbine Tests and perform special rod maneuvers
81-11	810510	S	0.0	H	5		ZZ	ZZZZZZ	Start of coastdown to End of Cycle Five Refueling
81-12	810530	S	0.0	B/H	5		RB	CONROD	Load reduction to perform Turbine Tests and perform special rod maneuvers

## 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

The basis for reporting this data to the Nuclear Regulatory Commission are 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 1-1-81 TO 12-31-81

DATE	NUMBER OF RODS	AVERAGE TIME IN SECONDS AT % INSERTED FROM FULLY WITHDRAWN				Max. Time For 90% Insertion	DESCRIPTION
		5	20	50	90		
		0.375	0.900	2.00	3.5		
5-25	88	0.29	0.66	1.42	2.49	2.83 (E-8)	Technical Specification 3.3.C.1 & 3.3.C.2 (Average Scram Insertion Time Unit 1 "A" Sequence Hot

## 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 1  
March 1978

1. Unit: 2 Reload: 5 Cycle: 6
2. Scheduled date for next refueling shutdown: 8-30-81 (Shutdown EOC5)
3. Scheduled date for restart following refueling: 12-20-81 (Startup BOC6)
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: No, Plan 10CFR50.59 Reloads for future cycles of Quad Cities Unit 2. The review will be conducted by early August, 1981.
5. Scheduled date(s) for submitting proposed licensing action and supporting information: Early August, 1981 for 10CFR50.59 related changes ~90 days prior to shutdown.
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:  
New Fuel Design: 1. Barrier Fuel  
2. Control Cell Core
7. The number of fuel assemblies.
- a. Number of assemblies in core: 724
- b. Number of assemblies in spent fuel pool: 672
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: 1460
- b. Planned increase in licensed storage: None
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: September, 1984  
(End of batch discharge capability)

APPROVE

APR 20 1978

Q.C.O.S.R.

QUAD-CITIES REFUELING  
INFORMATION REQUEST

QTP 300-532  
Revision 1  
March 1978

- \*  
1. Unit: 1 Reload: 6 Cycle: 7  
2. Scheduled date for next refueling shutdown: 9-12-82 (Shutdown EOC6)  
3. Scheduled date for restart following refueling: 12-5-82 (Startup BOC7)  
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: No, Plan 10CFR50.59 reloads for future cycles of Quad Cities Unit 1. The review will be conducted in August, 1982.  
5. Scheduled date(s) for submitting proposed licensing action and supporting information: August, 1982 for 10CFR50.59 related changes ~ 90 days prior to shutdown.  
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:  
New fuel designs:  
  
  
7. The number of fuel assemblies.  
a. Number of assemblies in core: 724  
b. Number of assemblies in spent fuel pool: 820  
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: 1460  
b. Planned increase in licensed storage: None  
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: September, 1985  
(end of batch discharge capability)

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## 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	-	In-Service 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
MPC	-	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
SDV	-	Shutdown Cooling Mode of RHRS
SDV	-	Scram Discharge Volume
SRM	-	Source Range Monitor
TBCCW	-	Turbine Building Closed Cooling Water System
TIP	-	Traveling Incore Probe
TSC	-	Technical Support Center