

QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

MARCH 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

8104140489

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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

March 1-9: Unit One began the reporting period in a continuation of the Maintenance Outage that began on February 28, 1981. Major items performed during this outage were: repaired leaking valves in the drywell ("B" feedwater check, "A" recirc pump suction, "A" recirc crosstie isolation, and head vent isolation valves), various SJAЕ valves, and miscellaneous valves in other systems. Due to difficulties in repairing the feedwater check valve, criticality was not achieved until 1610 on March 3. The generator was put on line at 0459 on March 4. One hour later, control rod 34-27 (J-7) overtravelled. Subsequently, the rod was inserted and electrically disarmed.

At 0625, a turbine trip was received due to a moisture separator high level. Rods were manually inserted to shut the reactor down. During this outage, control rod drive 34-27 was changed, repairs were effected on the moisture separator drain tank and two electromatic relief valves had now pilot valves installed.

The reactor was brought critical again on February 5, at 0950, and at 1912 the generator was put on line. Load was then increased at various rates, including a twelve hour xenon soak at 430 MWe, until load was held at 816 MWe on March 9.

March 10-12: Over this three day period load was held at an average of 810 MWe.

March 13-16: On March 13 the circuit breaker for "A" recirc pump discharge valve was tripping due to an unknown cause. Therefore, at 1500 load was reduced to 200 MWe, and a drywell entry was made at 2130. The problem was isolated to the cable inside the drywell. The cable was replaced by a temporary cable until a permanent repair can be effected during the next outage. At 0445, on March 14, power was increased at various rates until a load of 817 MWe was held on March 16.

March 17-20: An average load of 819 MWe was held during this four day period until 2030 on March 20. At that time load was dropped at 200 MWe/hour in preparation to trip the turbine off line.

March 21-23: On March 21, at 0040, the turbine was tripped off line. However, the reactor remained in Hot Standby. Repairs were then made to a leak in an EHC oil supply line. Also worked, at this time was the packing on the turbine stop valves. At 0610 the reactor was placed in RUN, and the generator was placed on line at 0723. Load was increased at various rates until 815 MWe was held at 1000 on March 23.

March 24-28: During this five day period an average load of 810 MWe was held, until 2310 on March 28. At that time load was dropped at 100 MWe/hour to 700 MWe.

March 29-31: At 0010 load was held at 700 MWe to perform weekly turbine tests and bi-weekly MSIV tests. During MSIV testing, 2A MSIV drifted past its test limit, initiating a Group I isolation and resultant reactor scram. The problem was investigated and a faulty limit switch on the MSIV was replaced. Also replaced a thermocouple on an electromatic relief valve and an accumulator on CRD 26-35 (G-10).

The reactor was brought critical at 1731, and on March 28, at 0233, the generator was synchronized. Load then was increased at various rates, ending the reporting period at 660 MWe, increasing at 8 MWe/hour.

B. UNIT TWO

March 1-3: Unit Two began the reporting period dropping load at 100 MWe/hour. At 0230 load was held at 400 MWe and the control rod pattern was changed. At 0430 load was increased using various rates until 817 MWe was held at 1800 on March 3.

March 4-14: Load was held at an average of 794 MWe over this 11 day period, with the exception of March 8. On that day the weekly turbine tests were performed resulting in an average of 780 MWe.

March 15-18: On March 15, at 0015, load was dropped to 160 MWe to perform scram timing on 89 control rods. The rod sequence was also changed at that time. At 1010 load was increased until March 18 at 0500 when a load of 800 MWe was held.

March 19-21: An average load of 800 MWe was held over this three day period.

March 22-23: On March 22 load was dropped to 600 MWe to perform special rod moves for the Nuclear Engineer. Load was then increased at 5 MWe/hour until 790 MWe was achieved and held at 0100 on March 24.

March 24-31: During this eight day period, load was held at an average of 788 MWe, except on March 28. On that day, there was an average load of 773 MWe, due to the weekly turbine tests being performed. The unit ended the reporting period holding a load of 796 MWe.

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

A. Amendments to Facility License or Technical Specifications

Amendments 63 and 57 to Licenses DPR-29 and DPR-30, respectively

On March 16, 1981, the NRC issued Amendment 63 to License DPR-29 and Amendment 57 to License DPR-30. These changes; (1) correct the minimum amount of diesel fire pump fuel oil in the day tank to be 150 gallons; (2) add the cable spreading room smoke detectors to Table 3.12-1; and (3) add the cable spreading room sprinkler system to Table 3.12-2.

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 |
|--------------|------------|--------------------------------------|---|---|--|
| Q11102 | | LPRM 16-49A | 100 VDC Power connector loose. | LPRM went downscale; APRM scram function not affected. | Tightened connection. |
| Q09039 | | CRD J-11 | "O" Rings & seals were worn. | CRD drifts past "00"; Scram function not affected. | Replaced drive. |
| Q11366 | | 1-203-3C Electro-matic Relief Valve | Worn pilot seat & disc. | Valve temperature indication was high. Valve was operable. | Repaired pilot valve. |
| Q10791 | | 1-8325 1B2 24/48 VDC Battery Charger | Loose capacitor lead on voltage regulator card. | Charger voltage was very erratic. Battery system was operable, as were loads. | Soldered lead. |
| Q11353 | 81-6/03L | 1-203-3A Target Rock Valve | Broken air hose to operator. | The relief valve function of the Target Rock Valve was inoperable. Other relief valves were operable. | Replaced stainless steel hose. |
| Q11399 | | M0-1-2301-3 HPCI Steam Inlet Valve | Worn valve packing. | Steam leak from valve; HPCI operability not affected. | Repacked valve. |
| Q10289 | | 1-2301-3 HPCI Steam Supply Valve | Leakage past the valve disc & seat. | Steam was leaking past the valve to the drains. HPCI was still operable. | Overhauled valve. |
| Q11323 | | 1-220-58B Feed-water Check | Leak from pressure seal ring. | Minor steam leakage in MSIV Room. | Welded & machined seal area--replaced seal ring. |

UNIT ONE MAINTENANCE SUMMARY

| W.R. NUMBER | LER NUMBER | COMPONENT | CAUSE OF MALFUNCTION | RESULTS & EFFECTS ON SAFE OPERATION | ACTION TAKEN TO PREVENT REPETITION |
|----------------|---------------|---|---|--|---|
| Q11582 | 81-7/03L | 1-202-5A Recirc Pump Discharge Valve | Grounded cable from breaker to valve motor. | LPCI loop select inoperable. Core Spray, Diesels & Containment Cooling were operable. | Temporary cable run. Will replace during refuel outage. |
| Q11507 | | MO-1-1001-16B RHR Heat Exchanger By- pass Valve | Auxiliary contact would not pick up. | The valve would not close; LPCI was operable. | Replaced auxiliary contacts. |
| Q07718 | | LPRM 16-41A | Went upscale. | LPRM was reading up- scale; APRM scram. | Replaced card--then replaced connector under vessel. |

UNIT TWO MAINTENANCE SUMMARY

| W.R. NUMBER | LER NUMBER | COMPONENT | CAUSE OF MALFUNCTION | RESULTS & EFFECTS ON SAFE OPERATION | ACTION TAKEN TO PREVENT REPETITION |
|----------------|---------------|--|--|--|---|
| Q11304 | | 2-595-125 Relay for Cleanup System Isolation | The relay became overheated and shorted out. | The reactor cleanup system was auto- isolated. | Replaced burned out relay. |
| Q09944 | | LPRM 24-09A | Faulty connector in LPRM power supply. | LPRM reads downscale; APRM RPS function not affected. | Replaced connector to power supply. |
| Q11583 | | 5742-2A & B Reactor Building Vent Dampers | Worn seals in the air cylinder. | The damper closed very slowly. Inlet dampers closed satisfactorily and SBTG auto-started. | Replaced air cylinder seals. |
| Q11592 | | Rod Block Monitor Ch. 7 | Does not get input from LPRM 08-33A. | The LPRM input to the RBM had to be bypassed. Limiting C.R. pattern did not exist. | Found loose connector on 08-33 relay and corrected. |

IV. LICENSEE EVENT REPORTS

The following is a tabular summary of all license 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.

| <u>Licensee Event Report Number</u> | <u>Date</u> | <u>Title of Occurrence</u> |
|-------------------------------------|-----------------|---|
| | <u>UNIT ONE</u> | |
| 81-6/03L | 03-02-81 | Broken air line to Target Rock valve |
| 81-7/03L | 03-13-81 | 1A Reactor Recirc Pump Discharge valve inoperable |
| | <u>UNIT TWO</u> | |
| 81-6/03L | 03-12-81 | Loss of Drywell to Torus D/P |
| 81-7/03L | 03-22-81 | No 1/2 scram on 2A MSIV while doing QOS 250-1, step 8 |
| 81-8/03L | 03-26-81 | Open fire stop RK2011 |

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 April 1, 1981

COMPLETED BY R C Tubbs

TELEPHONE 309-654-2241
ext. 174

OPERATING STATUS

0000 030181

1. Reporting period: 2400 033181 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>638.4</u> | <u>1991.0</u> | <u>63697.3</u> |
| 6. Reactor reserve shutdown hours | <u>0.0</u> | <u>0.0</u> | <u>421.9</u> |
| 7. Hours generator on line | <u>597.4</u> | <u>1937.0</u> | <u>8320.8</u> |
| 8. Unit reserve shutdown hours. | <u>0.0</u> | <u>0.0</u> | <u>909.2</u> |
| 9. Gross thermal energy generated (MWH) | <u>1297175</u> | <u>4381916</u> | <u>120524004</u> |
| 10. Gross electrical energy generated (MWH) | <u>426202</u> | <u>1444142</u> | <u>30323049</u> |
| 11. Net electrical energy generated (MWH) | <u>389384</u> | <u>1345567</u> | <u>30702848</u> |
| 12. Reactor service factor | <u>85.8</u> | <u>92.2</u> | <u>80.5</u> |
| 13. Reactor availability factor | <u>85.8</u> | <u>92.2</u> | <u>84.8</u> |
| 14. Unit service factor | <u>80.3</u> | <u>89.7</u> | <u>76.8</u> |
| 15. Unit availability factor | <u>80.3</u> | <u>89.7</u> | <u>77.9</u> |
| 16. Unit capacity factor (Using MDC) | <u>68.1</u> | <u>81.9</u> | <u>60.4</u> |
| 17. Unit capacity factor (Using Des. MWe) | <u>66.3</u> | <u>79.8</u> | <u>58.9</u> |
| 18. Unit forced outage rate | <u>9.5</u> | <u>3.7</u> | <u>7.7</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: _____

Operating at less than 75% due to high ambient temperature due to _____
_____ of the spray tank.

POOR ORIGINAL

OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT TWO

DATE April 1, 1981

COMPLETED BY R C Tubbs

TELEPHONE 309-654-2241
ext. 174

OPERATING STATUS

0900 030181

1. Reporting period: 2400 033181 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>2106.2</u> | <u>60939.0</u> |
| 6. Reactor reserve shutdown hours | <u>0.0</u> | <u>0.0</u> | <u>2985.8</u> |
| 7. Hours generator on line | <u>744.0</u> | <u>2090.1</u> | <u>50371.3</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>1750994</u> | <u>4870044</u> | <u>128120452</u> |
| 10. Gross electrical energy generated (MMH) | <u>557615</u> | <u>1547898</u> | <u>38269449</u> |
| 11. Net electrical energy generated (MWH) | <u>532344</u> | <u>1463787</u> | <u>35520739</u> |
| 12. Reactor service factor | <u>100.0</u> | <u>97.5</u> | <u>79.1</u> |
| 13. Reactor availability factor | <u>100.0</u> | <u>97.5</u> | <u>83.0</u> |
| 14. Unit service factor | <u>100.0</u> | <u>96.9</u> | <u>75.8</u> |
| 15. Unit availability factor | <u>100.0</u> | <u>96.8</u> | <u>76.7</u> |
| 16. Unit capacity factor (Using MDC) | <u>93.0</u> | <u>88.1</u> | <u>60.5</u> |
| 17. Unit capacity factor (Using Des. MWe) | <u>90.7</u> | <u>85.0</u> | <u>59.0</u> |
| 18. Unit forced outage rate | <u>0.0</u> | <u>0.0</u> | <u>8.9</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 due to long periods of high ambient temperature due to the thermal performance of the steam generator.

POOR ORIGINAL

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 59-254

UNIT ONE

DATE April 1, 1981

COMPLETED BY R C Tubbs

TELEPHONE 309-654-2241
ext. 174

MONTH March 1981

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

| | |
|-----|--------------|
| 1. | <u>-33.2</u> |
| 2. | <u>-34.2</u> |
| 3. | <u>-36.3</u> |
| 4. | <u>-29.8</u> |
| 5. | <u>6.0</u> |
| 6. | <u>427.7</u> |
| 7. | <u>569.2</u> |
| 8. | <u>680.0</u> |
| 9. | <u>752.4</u> |
| 10. | <u>763.1</u> |
| 11. | <u>742.8</u> |
| 12. | <u>754.3</u> |
| 13. | <u>603.7</u> |
| 14. | <u>423.6</u> |
| 15. | <u>640.7</u> |
| 16. | <u>751.4</u> |

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

| | |
|-----|--------------|
| 17. | <u>765.5</u> |
| 18. | <u>753.9</u> |
| 19. | <u>766.1</u> |
| 20. | <u>710.8</u> |
| 21. | <u>279.7</u> |
| 22. | <u>594.2</u> |
| 23. | <u>762.1</u> |
| 24. | <u>729.3</u> |
| 25. | <u>760.7</u> |
| 26. | <u>759.0</u> |
| 27. | <u>750.1</u> |
| 28. | <u>752.7</u> |
| 29. | <u>-31.7</u> |
| 30. | <u>339.8</u> |
| 31. | <u>578.6</u> |

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Outputs to the grid may be negative.

These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is reached, the output statement listing of the grid, there may be occasions when the daily average power level exceeds 1000 MW. In such cases, the average daily unit power output sheet should be prepared to report the actual output.

POOR ORIGINAL

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-265

UNIT TWO

DATE April 1, 1981

COMPLETED BY R C Tubbs

TELEPHONE 309-654-2241
ext. 174

MONTH March 1981

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

| | |
|-----|--------------|
| 1. | <u>529.6</u> |
| 2. | <u>645.4</u> |
| 3. | <u>734.1</u> |
| 4. | <u>758.1</u> |
| 5. | <u>773.0</u> |
| 6. | <u>766.1</u> |
| 7. | <u>763.7</u> |
| 8. | <u>745.0</u> |
| 9. | <u>752.8</u> |
| 10. | <u>760.3</u> |
| 11. | <u>752.7</u> |
| 12. | <u>753.4</u> |
| 13. | <u>751.2</u> |
| 14. | <u>753.9</u> |
| 15. | <u>366.5</u> |
| 16. | <u>563.8</u> |

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

| | |
|-----|--------------|
| 17. | <u>687.7</u> |
| 18. | <u>744.4</u> |
| 19. | <u>765.3</u> |
| 20. | <u>765.1</u> |
| 21. | <u>752.9</u> |
| 22. | <u>597.4</u> |
| 23. | <u>786.0</u> |
| 24. | <u>755.4</u> |
| 25. | <u>743.5</u> |
| 26. | <u>759.7</u> |
| 27. | <u>741.3</u> |
| 28. | <u>737.6</u> |
| 29. | <u>755.2</u> |
| 30. | <u>758.2</u> |
| 31. | <u>782.3</u> |

INSTRUCTIONS

For this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute the average daily power level.
 Daily figures will be used to determine the average for each reporting month. Note that when maximum dependable capacity is reached for the reporting month, there may be occasions when the daily average power level is less than the maximum capacity for the reactor (see peak load line). In such cases, the average daily unit power output should be computed to include the peak load.

POOR ORIGINAL

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-513
Revision 3
March 1978

DOCKET NO. 50-254

UNIT NAME Quad-Cities One

DATE April 1, 1981

REPORT MONTH MARCH 1981

COMPLETED BY R. G. Tamm

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 |
|------|--------|----------------|---------------------|--------|---------------------------------------|---------------------------------|----------------|-------------------|---|
| 81-3 | 810228 | S | 77.0 | B | 4 | | ZZ | ZZZZZZ | Continuation of Maintenance Outage |
| 81-4 | 810304 | F | 36.8 | A | 1 | | HB | XXXXXX | Turbine trip on high Moisture Separator Drain tank level |
| 81-5 | 810314 | S | 0.0 | B | 5 | 81-07 | CB | INSTRU | Load reduction for drywell entry to investigate repair problem with circuit breaker on 1A reactor discharge valve |
| 81-6 | 810321 | S | 6.7 | B | 5 | | HA | INSTRU | Turbine tripped to repair leak in EHC system |
| 81-7 | 810329 | F | 26.2 | A | 3 | | CD | INSTRU | Reactor scram due to MSIV drifting shut during routine test |

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-513
Revision 5
March 1978

DOCKET NO. 50-265

PLANT NAME Quad-Cities Two

DATE April 1, 1981

REPORT MONTH MARCH 1981

COMPLETED BY R. C. T. 1981

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 |
|------|--------|----------------|---------------------|--------|---------------------------------------|---------------------------------|----------------|-------------------|---|
| 81-4 | 810301 | S | 0.0 | H | 5 | | RB | CONROD | Load reduction to change control rod pattern |
| 81-5 | 810315 | S | 0.0 | B | 5 | | RB | CONROD | Load reduction to perform scram timing and change control rod sequence |
| 81-6 | 810322 | S | 0.0 | H/B | 5 | | RB | CONROD | Load reduction to perform special rod moves, turbine weekly, and reverse condenser flow |

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.

| <u>UNIT</u> | <u>DATE</u> | <u>VALVES ACTUATED</u> | <u>NO. & TYPE ACTUATIONS</u> | <u>PLANT CONDITIONS</u> | <u>DESCRIPTION OF EVENTS</u> |
|-------------|-------------|------------------------|----------------------------------|-------------------------|--|
| 1 | 03-03-81 | 1-203-3A | 1 Manual | RX PRESS 400 | Surveillance T.S. 4.5.D.1.b. |
| | | 1-203-3B | 1 Manual | | |
| | | 1-203-3C | 1 Manual | | |
| | | 1-203-3D | 1 Manual | | |
| | | 1-203-3E | 1 Manual | | |
| 1 | 03-05-81 | 1-203-3D | 1 Manual | RX PRESS 400 | Post Maintenance (Replaced pilot solenoid valve) |
| | | 1-203-3E | 1 Manual | | |

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 | 7 sec. | Technical Specification 3.3.C.1 & 3.3.C.2 (Average Scram Insertion Time) |
| 3-5-81 | 1 | 0.26 | 0.49 | 1.0 | 1.76 | | Unit 1 Cold Scram Time J-7 (3/4-27) Rod replaced--coupling problem |
| 3-6-81 | 1 | 0.31 | 0.69 | 1.51 | 2.62 | | J-7 Hot |
| 3-15-81 | 89 | 0.32 | 0.69 | 1.46 | 2.57 | 2.91(F-12) | Unit 2 "B" 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

- *
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, 1986
(end of batch discharge capability)

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QUAD-CITIES REFUELING
INFORMATION REQUEST

- *
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)

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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 |
| 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 |
| PCOMR | - 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 | - Traveling Incore Probe |
| TSS | - Technical Support Center |