



Commonwealth Edison  
Byron Nuclear Station  
4450 North German Church Road  
Byron, Illinois 61010

SP

*Dir. Dept -  
D W  
Hickman*

April 6, 1993

LTR: BYRON 93-0206  
FILE: 2.7.200 (1.10.0101)

Director, Office of Management Information  
and Program Control  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

ATTN: Document Control Desk

Gentlemen:

Enclosed for your information is the Monthly Performance Report  
covering Byron Nuclear Power Station for the period March 1 through  
March 31, 1993.

Sincerely,

G. K. Schwartz  
Station Manager  
Byron Nuclear Power Station

GKS/RC/rp

cc: A.B. Davis, NRC, Region III  
NRC Resident Inspector Byron  
IL Dept. of Nuclear Safety  
M.J. Wallace/E.D. Eenigenburg  
Nuclear Licensing Manager  
Nuclear Fuel Services, PWR Plant Support  
D.R. Eggett, Station Nuclear Engineering  
INPO Records Center  
J.B. Hickman - USNRC  
F. Yost - Utility Data Institute, Inc.

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BYRON NUCLEAR POWER STATION

UNIT 1 AND UNIT 2

MONTHLY PERFORMANCE REPORT

COMMONWEALTH EDISON COMPANY

NRC DOCKET NO. 050-454

NRC DOCKET NO. 050-455

LICENSE NO. NPF-37

LICENSE NO. NPF-66

I. Monthly Report for Byron UNIT 1 for the month of March 1993

A. Summary of Operating Experience for Unit 1

The Unit began this reporting period in Mode 6 (Refueling Outage).

B. OPERATING DATA REPORT

DOCKET NO.: 050-454  
 UNIT: Byron One  
 DATE: 04/06/93  
 COMPILED BY: R. Colglazier  
 TELEPHONE: (815)234-5441  
 x2282

OPERATING STATUS

1. Reporting Period: March, 1993. Gross Hours: 744
2. Currently Authorized Power Level: 3411 (MWt)  
 Design Electrical Rating: 1175 (MWe-gross)  
 Design Electrical Rating: 1120 (MWe-net)  
 Max Dependable Capacity: 1105 (MWe-net)
3. Power Level to Which Restricted (If Any): None
4. Reasons for Restriction (If Any): N/A

|                                    | THIS MONTH | YR TO DATE | CUMULATIVE* |
|------------------------------------|------------|------------|-------------|
| 5. Report Period Hrs.              | 744        | 2160       | 66,097      |
| 6. Rx Critical Hours               | 0          | 842.4      | 54,500.7    |
| 7. Rx Reserve Shutdown Hours       | 0          | 0          | 38          |
| 8. Hours Generator on Line         | 0          | 842.4      | 53,869.2    |
| 9. Unit Reserve Shutdown Hours     | 0          | 0          | 0           |
| *10. Gross Thermal Energy (MWH)    | 0          | 2,641,131  | 163,097.422 |
| 11. Gross Elec. Energy (MWH)       | 0          | 889,469    | 54,991.057  |
| 12. Net Elec. Energy (MWH)         | -9,392     | 848,322    | 52,054.188  |
| 13. Reactor Service Factor         | 0          | 39.00      | 82.46       |
| 14. Reactor Availability Factor    | 0          | 39.00      | 82.51       |
| 15. Unit Service Factor            | 0          | 38.99      | 81.50       |
| 16. Unit Availability Factor       | 0          | 38.99      | 81.50       |
| 17. Unit Capacity Factor (MDC net) | -1.14      | 35.54      | 71.27       |
| 18. Unit Capacity Factor (DER net) | -1.13      | 35.07      | 70.32       |
| 19. Unit Forced Outage Hrs.        | 0          | 0          | 1,403.4     |
| 20. Unit Forced Outage Rate        | 0          | 0          | 2.54        |

21. Shutdowns Scheduled Over Next 6 Months: Refueling Outage B1R05 2/5/93
22. If Shutdown at End of Report Period, Estimated Date of Startup: 4/15/93
23. Units in Test Status (Prior to Commercial Operation): None

\* Note - The cumulative numbers do not reflect power generated prior to commercial service.

C. AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.: 050-454  
 UNIT: Byron One  
 DATE: 04/06/93  
 COMPILED BY: R. Colglazier  
 TELEPHONE: (815)234-5441  
 x2282

MONTH: March, 1993

DAY AVERAGE DAILY POWER LEVEL  
 (MWe-Net)

|           |        |           |        |
|-----------|--------|-----------|--------|
| 1. _____  | -12 MW | 16. _____ | -12 MW |
| 2. _____  | -12 MW | 17. _____ | -12 MW |
| 3. _____  | -12 MW | 18. _____ | -12 MW |
| 4. _____  | -12 MW | 19. _____ | -12 MW |
| 5. _____  | -12 MW | 20. _____ | -12 MW |
| 6. _____  | -12 MW | 21. _____ | -12 MW |
| 7. _____  | -12 MW | 22. _____ | -12 MW |
| 8. _____  | -12 MW | 23. _____ | -12 MW |
| 9. _____  | -12 MW | 24. _____ | -13 MW |
| 10. _____ | -12 MW | 25. _____ | -13 MW |
| 11. _____ | -12 MW | 26. _____ | -13 MW |
| 12. _____ | -12 MW | 27. _____ | -13 MW |
| 13. _____ | -12 MW | 28. _____ | -13 MW |
| 14. _____ | -12 MW | 29. _____ | -13 MW |
| 15. _____ | -12 MW | 30. _____ | -13 MW |
|           |        | 31. _____ | -13 MW |

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.

Report Period March, 1993

UNIT SHUTDOWNS/REDUCTIONS  
(UNIT 1)

\*\*\*\*\*  
\* BYRON \*  
\*\*\*\*\*

| No. | Date    | Type | Hours | Reason | Method | LER Number | System | Component | Cause & Corrective Action to Prevent Recurrence |
|-----|---------|------|-------|--------|--------|------------|--------|-----------|---|
| 2   | 3/01/93 | S    | 744   | C      | 4      |            |        |           | B1R05   |

\*\*\*\*\*  
\* Summary \*  
\*\*\*\*\*

B1R05

| TYPE     | Reason                   | Method       | System & Component      |
|----------|--------------------------|--------------|-------------------------|
| F-Forced | A-Equip Failure          | F-Admin      | 1-Manual                |
| S-Sched  | B-Maint or Test          | G-Oper Error | 2-Manual Scram          |
|          | C-Refueling              | H-Other      | 3-Auto Scram            |
|          | D-Regulatory Restriction |              | 4-Continued             |
|          | E-Operator Training      |              | 5-Reduced Load          |
|          | & License Examination    |              | 9-Other                 |
|          |                          |              | Exhibit F & H           |
|          |                          |              | Instructions for        |
|          |                          |              | Preparation of          |
|          |                          |              | Data Entry Sheet        |
|          |                          |              | Licensee Event Report   |
|          |                          |              | (LER) File (NUREG-0161) |

E. UNIQUE REPORTING REQUIREMENTS (UNIT 1) for the month of March 1993

1. Safety/Relief valve operations for Unit One.

| DATE | VALVES<br>ACTUATED | NO & TYPE<br>ACTUATION | PLANT<br>CONDITION | DESCRIPTION<br>OF EVENT |
|------|--------------------|------------------------|--------------------|-------------------------|
|------|--------------------|------------------------|--------------------|-------------------------|

None

2. Licensee generated changes to ODCM.

None

3. Indications of failed fuel.

Fuel Reliability Indicator:

No FRI: Unit Shutdown

4. 10CFR50.46 Reporting Requirements: Peak Clad temperature (PCT) changes resulting from change or errors to the ECCS evaluation model.

Current licensing basis PCT plus margin allocation (°F)

Large Break LOCA

2051.3

Small Break LOCA

1681.6

Explain differences from previous report:

The small break LOCA value changed to account for incorrect safety injection data for the centrifugal charging pump (166.5°) and uncertainty of the pressurizer pressure initial condition during EGC operation (5°) per December 22, 1992 letter from Marcia A. Jackson to Dr. Thomas E. Murley.

F. LICENSEE EVENT REPORTS (UNIT 1)

The following is a tabular summary of all Licensee Event Reports for Byron Nuclear Power Station, Unit One, occurring during the reporting period, March 1, 1993 through March 31, 1993. This information is provided pursuant to the reportable occurrence reporting requirements as set forth in 10CFR 50.73.

| <u>Licensee Event Report Number</u> | <u>Occurrence Date</u> | <u>Title of Occurrence</u>                  |
|-------------------------------------|------------------------|---|
| LER: 454:93-003                     | 3/06/93                | Damaged fuel assemblies and upper internals |



II. Monthly Report for Byron UNIT 2 for the month of March 1993

A. Summary of Operating Experience for Unit 2

The Unit began this reporting period in Mode 1 (Power Operations).

The power level varied due to load following requirements.

B. OPERATING DATA REPORT

DOCKET NO.: 050-455  
 UNIT: Byron Two  
 DATE: 04/06/93  
 COMPILED BY: R. Colglazier  
 TELEPHONE: (815)234-5441  
 x2282

OPERATING STATUS

1. Reporting Period: March, 1993. Gross Hours: 744
2. Currently Authorized Power Level: 3411 (MWt)  
 Design Electrical Rating: 1175 (MWe-gross)  
 Design Electrical Rating: 1120 (MWe-net)  
 Max Dependable Capacity: 1105 (MWe-net)
3. Power Level to Which Restricted (If Any): N/A
4. Reasons for Restriction (If Any):

|   | THIS MONTH | YR TO DATE | CUMULATIVE*    |
|---|------------|------------|----------------|
| 5. Report Period Hrs.   | 744        | 2,160      | 49,201         |
| 6. Rx Critical Hours  | 744        | 2,160      | 42,495.6       |
| 7. Rx Reserve Shutdown Hours  | 0          | 0          | 0              |
| 8. Hours Generator on Line  | 744        | 2,160      | 41,965.3       |
| 9. Unit Reserve Shutdown Hours                                      | 0          | 0          | 0              |
| 10. Gross Thermal Energy (MWH)                                      | 2,500,150  | 7,087,014  | 119,837,471    |
| 11. Gross Elec. Energy (MWH)  | 855,112    | 2,429,777  | 40,645,715     |
| 12. Net Elec. Energy (MWH)  | 829,093    | 2,366,394  | 38,527,153     |
| 13. Reactor Service Factor  | 100        | 100        | 86.37          |
| 14. Reactor Availability Factor                                     | 100        | 100        | 86.37          |
| 15. Unit Service Factor   | 100        | 100        | 85.29          |
| 16. Unit Availability Factor  | 100        | 100        | 85.29          |
| 17. Unit Capacity Factor (MDC net)                                  | 100.85     | 99.15      | 70.86          |
| 18. Unit Capacity Factor (DER net)                                  | 99.50      | 97.82      | 69.92          |
| 19. Unit Forced Outage Hrs.   | 0          | 0          | 1244           |
| 20. Unit Forced Outage Rate   | 0          | 0          | 2.88           |
| 21. Shutdowns Scheduled Over Next 6 Months:                         |            | 1          | B2R04 08/29/93 |
| 22. If Shutdown at End of Report Period, Estimated Date of Startup: | NONE       |            |                |
| 23. Units in Test Status (Prior to Commercial Operation):           | None       |            |                |

\* Note - The cumulative numbers do not reflect power generated prior to commercial service.

C. AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.: 050-455  
 UNIT: Byron Two  
 DATE: 04/06/93  
 COMPILED BY: R. Colglazier  
 TELEPHONE: (815)234-5441  
 x2282

MONTH: March, 1993

DAY AVERAGE DAILY POWER LEVEL  
 (MWe-Net)

|           |         |           |         |
|-----------|---------|-----------|---------|
| 1. _____  | 1117 MW | 16. _____ | 1123 MW |
| 2. _____  | 1126 MW | 17. _____ | 1139 MW |
| 3. _____  | 1115 MW | 18. _____ | 1133 MW |
| 4. _____  | 1123 MW | 19. _____ | 1130 MW |
| 5. _____  | 1128 MW | 20. _____ | 1126 MW |
| 6. _____  | 1129 MW | 21. _____ | 1128 MW |
| 7. _____  | 1107 MW | 22. _____ | 1126 MW |
| 8. _____  | 1099 MW | 23. _____ | 1119 MW |
| 9. _____  | 1130 MW | 24. _____ | 1108 MW |
| 10. _____ | 1129 MW | 25. _____ | 1078 MW |
| 11. _____ | 1136 MW | 26. _____ | 1055 MW |
| 12. _____ | 1139 MW | 27. _____ | 1098 MW |
| 13. _____ | 1137 MW | 28. _____ | 1067 MW |
| 14. _____ | 1121 MW | 29. _____ | 1068 MW |
| 15. _____ | 1127 MW | 30. _____ | 1088 MW |
|           |         | 31. _____ | 1083 MW |

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.

Report Period March, 1993

UNIT SHUTDOWNS/REDUCTIONS  
(UNIT 2)

\*\*\*\*\*  
\* BYRON \*  
\*\*\*\*\*

No. Date Type Hours Reason Method LER Number System Component Cause & Corrective Action to Prevent Recurrence

\*\*\*\*\*  
\* Summary \*  
\*\*\*\*\*

No Shutdown or Major Reductions for Unit 2 in March

| <u>TYPE</u> | <u>Reason</u>            | <u>Method</u> | <u>System &amp; Component</u> |                         |
|-------------|--------------------------|---------------|-------------------------------|-------------------------|
| F-Forced    | A-Equip Failure          | F-Admin       | 1-Manual                      | Exhibit F & H           |
| S-Sched     | B-Maint or Test          | G-Oper Error  | 2-Manual Scram                | Instructions for        |
|             | C-Refueling              | H-Other       | 3-Auto Scram                  | Preparation of          |
|             | D-Regulatory Restriction |               | 4-Continued                   | Data Entry Sheet        |
|             | E-Operator Training      |               | 5-Reduced Load                | Licensee Event Report   |
|             | & License Examination    |               | 9-Other                       | (LER) File (NUREG-0161) |

E. UNIQUE REPORTING REQUIREMENTS (UNIT 2) for the month of March 1993

1. Safety/Relief valve operations for Unit Two.

| DATE | VALVES<br>ACTUATED | NO & TYPE<br>ACTUATION | PLANT<br>CONDITION | DESCRIPTION<br>OF EVENT |
|------|--------------------|------------------------|--------------------|-------------------------|
| None |                    |                        |                    |                         |

2. Licensee generated changes to ODCM.

None

3. Indications of failed fuel.

No. Fuel Reliability Indicator: FRI =  $2.3E-5$   $\mu$ Ci/CC

4. 10CFR50.46 Reporting Requirements: Peak Clad temperature (PCT) changes resulting from changes or errors to the ECCS evaluations model.

Current licensing basis PCT plus major allocations (°F)

Large Break LOCA  
2064.1

Small Break LOCA  
1681.6

Explain differences from previous report:

The small break LOCA value changed to account for incorrect safety inject on data for the centrifugal charging pump (166.5°) and uncertainty of the pressurizer pressure initial condition during EGC operation (5°) per December 22, 1992 letter from Marcia A. Jackson to Dr. Thomas E. Murley.

F. LICENSEE EVENT REPORTS (UNIT 2)

The following is a tabular summary of all Licensee Event Reports for Byron Nuclear Power Station, Unit Two, occurring during the reporting period, March 1, 1993 through March 31, 1993. This information is provided pursuant to the reportable occurrence reporting requirements as set forth in 10CFR 50.73.

| <u>Licensee Event Report Number</u> | <u>Occurrence Date</u> | <u>Title of Occurrence</u>                        |
|-------------------------------------|------------------------|---|
| LER 455:93-002                      | 3/11/93                | Unit 1 service water pump availability to Unit 2. |