

OPERATING DATA REPORT

DOCKET NO. 50-409
 DATE 08-06-79
 COMPLETED BY L.G. Papworth
 TELEPHONE 608-689-2331

OPERATING STATUS

1. Unit Name: La Crosse Boiling Water Reactor
2. Reporting Period: 0000 79-01-07 to 2400 79-31-07
3. Licensed Thermal Power (MWt): 165
4. Nameplate Rating (Gross MWe): 65.3
5. Design Electrical Rating (Net MWe): 50
6. Maximum Dependable Capacity (Gross MWe): 50
7. Maximum Dependable Capacity (Net MWe): 48
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

Notes

9. Power Level To Which Restricted, If Any (Net MWe): 48 MWe-Net
10. Reasons For Restrictions, If Any: Self-imposed Restriction due to Nuclear Instrumentation Noise at Higher Power Levels.

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	<u>744</u>	<u>5087</u>	<u>85,442</u>
12. Number Of Hours Reactor Was Critical	<u>710.0</u>	<u>3,286</u>	<u>54,465.2</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>478</u>
14. Hours Generator On-Line	<u>678.3</u>	<u>3,054.3</u>	<u>49,772.4</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>79</u>
16. Gross Thermal Energy Generated (MWH)	<u>91,239</u>	<u>314,659</u>	<u>6,851,901</u>
17. Gross Electrical Energy Generated (MWH)	<u>25,824</u>	<u>88,496</u>	<u>2,070,805</u>
18. Net Electrical Energy Generated (MWH)	<u>24,055</u>	<u>80,690</u>	<u>1,912,493</u>
19. Unit Service Factor	<u>91.2</u>	<u>60.0</u>	<u>58.3</u>
20. Unit Availability Factor	<u>91.2</u>	<u>60.0</u>	<u>58.4</u>
21. Unit Capacity Factor (Using MDC Net)	<u>67.4</u>	<u>33.1</u>	<u>46.6</u>
22. Unit Capacity Factor (Using DER Net)	<u>64.7</u>	<u>31.7</u>	<u>44.8</u>
23. Unit Forced Outage Rate	<u>8.8</u>	<u>13.0</u>	<u>6.0</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

None Scheduled

25. If Shut Down At End Of Report Period, Estimated Date of Startup: NA

26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	<u>_____</u>	<u>_____</u>
INITIAL ELECTRICITY	<u>_____</u>	<u>_____</u>
COMMERCIAL OPERATION	<u>_____</u>	<u>_____</u>

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-409
 UNIT LACBWR
 DATE 08-06-79
 COMPLETED BY L.G.Papworth
 TELEPHONE 608-689-2331

MONTH JULY 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>42</u>	17	<u>36</u>
2	<u>42</u>	18	<u>37</u>
3	<u>26</u>	19	<u>37</u>
4	<u>6</u>	20	<u>37</u>
5	<u>0</u>	21	<u>37</u>
6	<u>12</u>	22	<u>38</u>
7	<u>23</u>	23	<u>38</u>
8	<u>12</u>	24	<u>38</u>
9	<u>30</u>	25	<u>38</u>
10	<u>35</u>	26	<u>38</u>
11	<u>37</u>	27	<u>38</u>
12	<u>37</u>	28	<u>38</u>
13	<u>37</u>	29	<u>38</u>
14	<u>37</u>	30	<u>37</u>
15	<u>37</u>	31	<u>29</u>
16	<u>37</u>		

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

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(9/77)

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY 1979

DOCKET NO. 50-409
 UNIT NAME LACBWR
 DATE 08-06-79
 COMPLETED BY L.G. Papworth
 TELEPHONE 608-689-2331

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
79-08	79-07-03	F	19.62	G	3	NA	CD	XXXXXX	A REACTOR SCRAM OCCURRED DUE TO PERSONNEL ACTION WHILE PERFORMING MAINTENANCE ON A CONTROL ROD POSITION SECONDARY INDICATION CIRCUIT. WHEN A CIRCUIT FUSE WAS REMOVED FROM THE CIRCUIT, WHICH ALSO SUPPLIES POWER TO A STEAM PRESSURE TO TURBINE INDICATION TRANSMITTER, THE MSIV CLOSED WHICH PROMPTED AN AUTOMATIC REACTOR SCRAM.
79-09	79-07-04	F	33.92	A	1	79-13	HE	VALVOP	A PLANT SHUTDOWN WAS CONDUCTED TO REPAIR THE MAIN STEAM BYPASS VALVE OPERATING CYLINDER WHICH HAD DEVELOPED A HYDRAULIC OIL LEAK. REPAIRS WERE PERFORMED WHICH INCLUDED REPLACEMENT OF VALVE OPERATING CYLINDER SEALS.

¹
 F - Forced
 S - Scheduled

²
 Reason:
 A - Equipment Failure (Explain)
 B - Maintenance or Test
 C - Refueling
 D - Regulatory Restriction
 E - Operator Training & License Examination
 F - Administrative
 G - Operational Error (Explain)
 H - Other (Explain)

³
 Method:
 1 - Manual
 2 - Manual Scram
 3 - Automatic Scram
 4 - Other (Explain)

⁴
 Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

⁵
 Exhibit I - Same Source

(9/77)

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UNIT SHUTDOWNS AND POWER REDUCTIONS

INSTRUCTIONS

This report should describe all plant shutdowns during the report period. In addition, it should be the source of explanation of significant dips in average power levels. Each significant reduction in power level (greater than 20% reduction in average daily power level for the preceding 24 hours) should be noted, even though the unit may not have been shut down completely¹. For such reductions in power level, the duration should be listed as zero, the method of reduction should be listed as 4 (Other), and the Cause and Corrective Action to Prevent Recurrence column should explain. The Cause and Corrective Action to Prevent Recurrence column should be used to provide any needed explanation to fully describe the circumstances of the outage or power reduction.

NUMBER. This column should indicate the sequential number assigned to each shutdown or significant reduction in power for that calendar year. When a shutdown or significant power reduction begins in one report period and ends in another, an entry should be made for both report periods to be sure all shutdowns or significant power reductions are reported. Until a unit has achieved its first power generation, no number should be assigned to each entry.

DATE. This column should indicate the date of the start of each shutdown or significant power reduction. Report as year, month, and day. August 14, 1977 would be reported as 770814. When a shutdown or significant power reduction begins in one report period and ends in another, an entry should be made for both report periods to be sure all shutdowns or significant power reductions are reported.

TYPE. Use "F" or "S" to indicate either "Forced" or "Scheduled," respectively, for each shutdown or significant power reduction. Forced shutdowns include those required to be initiated by no later than the weekend following discovery of an off-normal condition. It is recognized that some judgment is required in categorizing shutdowns in this way. In general, a forced shutdown is one that would not have been completed in the absence of the condition for which corrective action was taken.

DURATION. Self-explanatory. When a shutdown extends beyond the end of a report period, count only the time to the end of the report period and pick up the ensuing down time in the following report periods. Report duration of outages rounded to the nearest tenth of an hour to facilitate summation. The sum of the total outage hours plus the hours the generator was on line should equal the gross hours in the reporting period.

REASON. Categorize by letter designation in accordance with the table appearing on the report form. If category H must be used, supply brief comments.

METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER. Categorize by number designation

¹Note that this differs from the Edison Electric Institute (EEI) definitions of "Forced Partial Outage" and "Scheduled Partial Outage." For these terms, EEI uses a change of 30 MW as the break point. For larger power reactors, 30 MW is too small a change to warrant explanation.

in accordance with the table appearing on the report form. If category 4 must be used, supply brief comments.

LICENSEE EVENT REPORT #. Reference the applicable reportable occurrence pertaining to the outage or power reduction. Enter the first four parts (event year, sequential report number, occurrence code and report type) of the five part designation as described in Item 17 of Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161). This information may not be immediately evident for all such shutdowns, of course, since further investigation may be required to ascertain whether or not a reportable occurrence was involved. If the outage or power reduction will not result in a reportable occurrence, the positive indication of this lack of correlation should be noted as not applicable (N/A).

SYSTEM CODE. The system in which the outage or power reduction originated should be noted by the two digit code of Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161).

Systems that do not fit any existing code should be designated XX. The code ZZ should be used for those events where a system is not applicable.

COMPONENT CODE. Select the most appropriate component from Exhibit I - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161), using the following criteria:

- If a component failed, use the component directly involved.
- If not a component failure, use the related component; e.g., wrong valve operated through error; list valve as component.
- If a chain of failures occurs, the first component to malfunction should be listed. The sequence of events, including the other components which fail, should be described under the Cause and Corrective Action to Prevent Recurrence column.

Components that do not fit any existing code should be designated XXXXXX. The code ZZZZZZ should be used for events where a component designation is not applicable.

CAUSE & CORRECTIVE ACTION TO PREVENT RECURRENCE. Use the column in a narrative fashion to amplify or explain the circumstances of the shutdown or power reduction. The column should include the specific cause for each shutdown or significant power reduction and the immediate and contemplated long term corrective action taken, if appropriate. This column should also be used for a description of the major safety-related corrective maintenance performed during the outage or power reduction including an identification of the critical path activity and a report of any single release of radioactivity or single radiation exposure specifically associated with the outage which accounts for more than 10 percent of the allowable annual values.

For long textual reports continue narrative on separate pages and reference the shutdown or power reduction by this narrative.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JULY 1979

DOCKET NO. 50-409
 UNIT NAME LACBWR
 DATE 08-06-79
 COMPLETED BY L.G. Papworth
 TELEPHONE 608-689-2331

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
79-10	79-07-07	F	12.18	A	3	NA	CJ	INSTRU	A FAILURE OF A SEAL INJECTION DIFFERENTIAL PRESSURE TRANSMITTER CAUSED BOTH FORCED CIRCULATION PUMPS (FCP) TO TRIP, WHICH PROMPTED THE SAFETY SYSTEM TO SCRAM THE REACTOR BECAUSE A POWER-TO-FLOW MISMATCH THEN EXISTED. THE TRANSMITTER WAS REPLACED.
79-11	79-07-31	F	NA	B	4	NA	HC	XXXXXX	A POWER REDUCTION FROM 85% TO 46% WAS CONDUCTED FOR THE PURPOSE OF REMOVING ONE OF THE TWO TURBINE CONDENSER WATER BOXES FROM SERVICE TO REMOVE RIVER SILT. THIS WAS DONE IN AN EFFORT TO REDUCE A CONDENSER BACK PRESSURE CONDITION.

1
 F Forced
 S Scheduled

2
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

3
 Method:
 1-Manual
 2-Manual Scram.
 3-Automatic Scram.
 4-Other (Explain)

4
 Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
 Exhibit I - Same Source

(9/77)

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 031013

UNIT SHUTDOWNS AND POWER REDUCTIONS

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NARRATIVE SUMMARY OF OPERATING EXPERIENCE

JULY 1979

At the onset of the July reporting period, power generation was continuing at an output of 42 MWe-Net (93% Reactor Rated Thermal Power). A reactor scram occurred at 1520 hours on July 3, 1979 due to closure of the Main Steam Isolation Valve (MSIV). The closure was indirectly initiated by personnel action when a fuse was removed from an instrumentation circuit to allow replacement of a control rod secondary position indication light. Steam pressure to turbine indication is also in this same circuit and when the fuse was removed, power was lost to that indication which caused the MSIV to close and a reactor scram to then result.

A reactor startup was conducted the same day with the reactor taken critical at 2205 hours. The turbine generator was synchronized to the DPC grid at 1057 hours on July 4th. At 2025 hours the same day, a reactor shutdown was initiated for the purpose of repair of the Main Steam Bypass Valve operating cylinder which had developed a hydraulic oil leak. Following plant shutdown, repairs were conducted which included replacement of the valve operating cylinder seals.

Following Main Steam Bypass Valve cylinder repairs, a reactor startup was conducted with the reactor taken critical at 1955 hours on July 5. The turbine generator was connected to the DPC grid at 0645 hours on July 7.

At 1837 hours on July 7, a reactor scram occurred at a power level of 75% rated thermal power. A condition of low seal injection differential pressure, which was a result of a faulty differential pressure transmitter, tripped both forced circulation pumps which prompted the safety system to scram the reactor due to a power-to-flow mismatch. The differential pressure transmitter was promptly replaced and a reactor startup initiated with the reactor taken critical at 2315 hours the same day. The turbine generator was connected to the DPC grid at 0648 hours on July 8.

Power escalation continued until July 11 when turbine condenser back pressure (reduction in condenser vacuum) reached an administrative limit. The back pressure was thought to be caused by accumulation of river silt in the condenser.

Power generation continued in the range of 83% - 86% rated thermal power until July 31 when a power reduction to 46% was performed so that one of the two turbine condenser water boxes could be removed from service for silt removal.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE - JULY 1979 (Cont'd)

Reactor power was being maintained at 46% at end of month.
Electrical generation was 16 MWe-Net.

The maximum power level at which the reactor was operated during July 1979 was 42 MWe-Net (93% Rated Thermal Power).

The off-gas activity levels, as measured at the 150 ft³ holdup tank effluent monitor (prior to entry into the augmented off-gas holdup system) did not exceed 563 curies per day (this at 93% power) during July 1979 and the alpha activity in the primary coolant did not exceed 6.5×10^{-7} $\mu\text{Ci/gm}$ during the reporting period.

Significant maintenance items performed during the July 1979 reporting period are indicated on attached Instrument and Electrical Maintenance and Mechanical Maintenance listings.

JULY 1979

MECHANICAL MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION		CORRECTIVE ACTION
			CAUSE	RESULT	
CRD Hydraulic Charging Accumulator	Corrective MR 2714	NA	Improper Seal Around Base of Accumulator	Hydraulic Oil Leak from Base of Accumulator	Rebuilt Accumulator and Reinstalled
High Volume Accumulator (HVA) Valve	Corrective MR 2701	Outage 79-09	Normal Wear	Leakage Through Valve	Rebuilt Spare Pilot Valve and Installed in System
1A and 1B Forced Circulation Pump Discharge Rotoport Valves	Preventive MR 2724	Outage 79-09	NA	NA	Replaced Cup Seals. Old Seals Satisfactory.
Main Steam Bypass Valve Actuator	Corrective MR 2722	LER 79-13	Hydraulic Valve Actuator Seals Failed	Excessive Leakage Through Seals	Replaced Seals In Hydraulic Cylinder of Valve Actuator
Heating Boiler	Preventive	NA	NA	NA	Open Boiler for Cleaning and Inspection
High Pressure Service Water (HPSW) Electric Pump	Corrective MR 2711	NA	Excessive End Play in Pump Shaft	Mechanical Seal had Excessive Leakage Through It	Insatllled New Mechanical Seal and Contacted Pump Manufacturer for Pump Repair
Heating Steam to Containment Manual Isolation Valve	Corrective	NA	Normal Wear	Leakage by Valve	Installed New Valve
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JULY 1979

INSTRUMENT AND ELECTRICAL MAINTENANCE

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION		CORRECTIVE ACTION
			CAUSE	RESULT	
Diesel Fire Pump 1A	Corrective MR 2716	NA	Diode Shorted	Start Solenoid Shorted	Replaced Defective Diode
Control Rod Drive	Corrective MR 2717	Outage 79-08	Usage	Light Inoperative	Replaced Lamp
Turbine Control	Corrective MR 2710	Outage 79-10	Contaminated Valve	Drain Valve Slow	Cleaned Solenoid Valve
Well Water	Corrective MR 2725	NA	Adjustment Low	Low Water Pressure	Adjusted Pressure Switch
Seal Injection	Corrective MR 2731	Outage 79-10	System Pulsations	Capsule Weld Broke	Replaced with Spare Unit
Water Storage Tank	Corrective MR 2721	Outage 79-09	Unknown	Feed Back Arm Off	Replaced Feed Back Arm
Waste Water Monitor	Corrective MR 2737	NA	Contaminated Contacts	No Alarm	Cleaned Alarm Contacts
Environmental Temperature	Corrective MR 2600	NA	Defective Transistor	Incorrect Readout	Replaced Unit After Repair
Area Radiation Monitor	Corrective MR 2743	NA	Usage	Inoperative Power Supply	Replaced Defective Capacitor
Conductivity Recorder	Corrective MR 2741	NA	Usage	Worn Gear	Replaced Drive Gear
Make-Up Demineralizer	Corrective MR 2723	NA	Contaminated Contacts	Inoperable Cycle	Cleaned Program Contacts
Heating Boiler	Facility Change 79-02	NA	Insurance Company Request	Back-Up Low Level Switch Installed	Completed Facility Change
Security System	New Installation NA	NA	New Installation	Additional Micro-Wave Units Installed	Installed Additional Wire

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