

**OPERATING DATA REPORT**

DOCKET NO. 50-409  
 DATE 11-02-79  
 COMPLETED BY L.S. GOODMAN  
 TELEPHONE 608-689-2331

**OPERATING STATUS**

1. Unit Name: La Crosse Boiling Water Reactor
2. Reporting Period: 0000 79-01-10 to 79-31-10
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

Notes

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

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>745</u>	<u>7,296</u>	<u>87,651</u>
12. Number Of Hours Reactor Was Critical	<u>590.3</u>	<u>5,194.6</u>	<u>56,373.8</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>478</u>
14. Hours Generator On-Line	<u>559.6</u>	<u>4,879.2</u>	<u>51,597.3</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>79</u>
16. Gross Thermal Energy Generated (MWH)	<u>76,668</u>	<u>558,060</u>	<u>7,095,303</u>
17. Gross Electrical Energy Generated (MWH)	<u>22,988</u>	<u>160,540</u>	<u>2,142,849</u>
18. Net Electrical Energy Generated (MWH)	<u>21,480</u>	<u>147,971</u>	<u>1,979,774</u>
19. Unit Service Factor	<u>75.1</u>	<u>66.9</u>	<u>58.9</u>
20. Unit Availability Factor	<u>75.1</u>	<u>66.9</u>	<u>59.0</u>
21. Unit Capacity Factor (Using MDC Net)	<u>60.1</u>	<u>42.3</u>	<u>47.1</u>
22. Unit Capacity Factor (Using DER Net)	<u>57.7</u>	<u>40.6</u>	<u>45.2</u>
23. Unit Forced Outage Rate	<u>24.9</u>	<u>14.7</u>	<u>6.5</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):  
REFUELING SHUTDOWN: MARCH 1, 1980, 6-8 WEEKS DURATION.

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

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

INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

1364 051  
 7911200 377

**AVERAGE DAILY UNIT POWER LEVEL**

DOCKET NO. 50-409  
 UNIT LACBWR  
 DATE 11-02-79  
 COMPLETED BY L. S. GOODMAN  
 TELEPHONE 608-689-2331

MONTH OCTOBER 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>0</u>	17	<u>40</u>
2	<u>0</u>	18	<u>40</u>
3	<u>0</u>	19	<u>40</u>
4	<u>0</u>	20	<u>40</u>
5	<u>0</u>	21	<u>40</u>
6	<u>0</u>	22	<u>40</u>
7	<u>0</u>	23	<u>40</u>
8	<u>2</u>	24	<u>40</u>
9	<u>24</u>	25	<u>40</u>
10	<u>35</u>	26	<u>40</u>
11	<u>40</u>	27	<u>40</u>
12	<u>40</u>	28	<u>40</u>
13	<u>40</u>	29	<u>40</u>
14	<u>40</u>	30	<u>40</u>
15	<u>40</u>	31	<u>40</u>
16	<u>40</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.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH OCTOBER 1979

DOCKET NO. 50-409  
 UNIT NAME LACBWR  
 DATE 11-02-79  
 COMPLETED BY L. S. GOODMAN  
 TELEPHONE 608-689-2331

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
79-13	79-09-28	F	185.4	A	3	NA	RB	CRDRVE	THE SEPTEMBER OUTAGE DUE TO MECHANICAL SEAL LEAKAGE IN UPPER CONTROL ROD DRIVE MECHANISM #10 WAS COMPLETED. THE MECHANICAL SEAL WAS REPLACED.

<sup>1</sup>  
 F: Forced  
 S: Scheduled

<sup>2</sup>  
 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)

<sup>3</sup>  
 Method:  
 1-Manual  
 2-Manual Scram.  
 3-Automatic Scram.  
 4-Other (Explain)

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

<sup>5</sup>  
 Exhibit I - Same Source

(9/77)

176A 053

## 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 completely<sup>1</sup>. 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

<sup>1</sup>Note 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 paper and reference the shutdown or power reduction for this narrative.

1360 054

## MECHANICAL MAINTENANCE - OCTOBER 1979

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION		CORRECTIVE ACTION
			CAUSE	RESULT	
MAIN STEAM BYPASS VALVE ACTUATOR SERVO VALVE	CORRECTIVE MR #2794	OUTAGE 79-13	WEAR	OIL LEAKAGE FROM SERVO	INSTALLED NEW O-RINGS IN SERVO BLOCK
SEAL INJECTION PUMP DISCHARGE ACCUMULATOR	CORRECTIVE MR #2800	OUTAGE 79-13	FLAW IN ORIGINAL CASTING	WATER LEAKAGE THROUGH FLAW	OVERLAYED BOTTOM OF PLUG WITH WELD TO SEAL FLAW
CONDENSATE TO GLAND STEAM GENERATOR CONTROL VALVE	CORRECTIVE MR #2675	OUTAGE 79-13	WEAR	VALVE INTERNALS WORN AND NOT REPLACEABLE	REPLACED VALVE WITH NEW VALVE OF SUPERIOR MATERIALS
LOWER CONTROL ROD DRIVE #21 AND #28	PREVENTIVE MR #2824	OUTAGE 79-13	NA	NA	PERFORMED PM'S
UPPER CONTROL ROD DRIVE #10	CORRECTIVE MR #2822	OUTAGE 79-13	SCORING ON STELLITE FACE ON MECHANICAL SEAL	EXCESSIVE LEAKAGE THROUGH SEAL CAUSING A SHORT OF A SCRAM SOLENOID	REPLACED MECHANICAL SEAL AND PERFORMED PM
TURBINE OIL PURIFIER	PREVENTIVE MR #2781	OUTAGE 79-13	NA	NA	CLEANED AND REPLACED BEARINGS AND GASKETS
MOUNTING FLANGE FOR UPPER CONTROL ROD DRIVE #10	CORRECTIVE MR #2822	OUTAGE 79-13	MOUNTING BOLT SEIZED DURING REMOVAL OF UCRD #10	BOLT SHEARED	BROKEN PART OF BOLT WAS DRILLED AND REMOVED. THREADS WERE CLEANED WITH A TAP.
LOWER CONTROL ROD DRIVE NOS. 18, 19, 21 AND 2	CORRECTIVE MR #2816	OUTAGE 79-13	APPARENT DEFECTIVE PACKING	OIL LEAKAGE PAST SHAFT PACKING	PACKING RECEIVED FROM 1979 PURCHASE WAS REMOVED AND 1977 PACKING WAS INSTALLED
1A REACTOR FEED PUMP	CORRECTIVE MR #2812	OUTAGE 79-13	WEAR	EXCESSIVE LEAKAGE	INSTALLED NEW MECHANICAL SEAL AND O-RINGS
1364 055 1771 055					



## MECHANICAL MAINTENANCE - OCTOBER 1979

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION		CORRECTIVE ACTION
			CAUSE	RESULT	
1B CIRCULATING PUMP	CORRECTIVE MR #2846	NA	UNKNOWN	BROKEN DRAIN PIPE ALLOWING WATER TO DRAIN ON TO FLOOR	REPAIRED BROKEN DRAIN PIPE
ELECTRIC DRIVEN HIGH PRESSURE SERVICE WATER (HPSW) PUMP	CORRECTIVE MR #2851	NA	IMPROPERLY MACHINED BEARING RETAINER CAP	EXCESSIVE END PLAY OF PUMP SHAFT CAUSING PREMATURE FAILURE OF MECHANICAL SEAL	REPLACED BEARING RETAINER WITH PROPERLY MACHINED CAP AND REPLACED MECHANICAL SEAL
1B AND 1A HPSW DIESELS	PREVENTIVE MR #2850 MR #2854	NA	COOLANT HOSES OLD AND CRACKED	NA	REPLACED COOLANT HOSES AND ADDED ANTIFREEZE

1264 056

## INSTRUMENT AND ELECTRICAL MAINTENANCE - OCTOBER 1979

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION		CORRECTIVE ACTION
			CAUSE	RESULT	
FORCED CIRCULATION PUMP DISCHARGE VALVE	CORRECTIVE MR #2789	OUTAGE 79-13	OPEN WIRE	POSITION INDICATOR INOPERABLE	REPLACED WIRE ON POTENTIOMETER
FORCED CIRCULATION AUXILIARY OIL PRESSURE SWITCH	CORRECTIVE MR #2707	OUTAGE 79-13	SETPOINT CHECK	ADJUSTED SETPOINT	CALIBRATED PRESSURE SWITCH
GENERATOR EXCITATION	CORRECTIVE MR #2819	OUTAGE 79-13	CARBON DUST	LOW RESISTANCE TO GROUND	CLEANED BRUSH RIG AND BED PLATE
GENERATOR MAIN A.C. OIL PUMP	CORRECTIVE MR #2817	OUTAGE 79-13	COIL BURNOUT	BREAKER INOPERABLE	REPLACED OIL AND TESTED BREAKER
DEMINERALIZED WATER	CORRECTIVE MR #2815	OUTAGE 79-13	DEFECTIVE SEAL	LEAKING VALVES	REPLACED 1A & 1B SOLENOID VALVES
CONTROL ROD DRIVE	PREVENTIVE	OUTAGE 79-13	P.M. DUE	COMPLETED P.M.	REPLACED CRD INSERT/WITHDRAW CONTROL SWITCH
CONTROL SWITCHES	PREVENTIVE	OUTAGE 79-13	P.M. DUE	COMPLETED P.M.	CLEANED AND LUBRICATED ALL C/R CONTROL SWITCHES
WELDING OVEN	PREVENTIVE	NA	P.M. DUE	COMPLETED P.M.	CHECKED WELDING ROD OVEN FOR CORRECT TEMPERATURE SETPOINT
HYDROGEN CONCENTRATION	PREVENTIVE	NA	P.M. DUE	COMPLETED P.M.	TESTED ALARM SETPOINT
CONTROL ROD DRIVE	PREVENTIVE	OUTAGE 79-13	P.M. DUE	COMPLETED P.M.	TESTED PRESSURE SWITCHES FOR CRD NOS. 18, 19, 21, & 28.
SEAL INJECTION	CORRECTIVE MR #2826	OUTAGE 79-13	CALIBRATION REQUEST	TESTED SETPOINT	CALIBRATED INDICATOR AND CONTROLLER
1364 057					

## INSTRUMENT AND ELECTRICAL MAINTENANCE - OCTOBER 1979

EQUIPMENT	NATURE OF MAINTENANCE	LER OR OUTAGE NUMBER	MALFUNCTION		CORRECTIVE ACTION
			CAUSE	RESULT	
OFF-GAS FLOW	CORRECTIVE MR #2825	OUTAGE 79-13	CALIBRATION REQUEST	TESTED SETPOINT	CALIBRATED FLOW INDICATOR
CONTROL ROD DRIVE	CORRECTIVE MR #2828 MR #2835	OUTAGE 79-13	DAMAGED DURING MAINTENANCE	INOPERABLE SECONDARY POS- ITION INDICATOR	REPLACED POSITION WAND FOR CRD UNIT #21 AND #10
CONTROL AIR DRYER	PREVENTIVE MR #2832	OUTAGE 79-13	P.M. DUE	COMPLETED P.M.	INSTALLED NEW O-RINGS ON AIR OPERATED CON- TROL VALVES
NUCLEAR INSTRUMENTA- TION POWER SUPPLY	CORRECTIVE MR #2857	NA	DEFECTIVE RELAY CONTACTS	VOLTAGE TOO HIGH	REPLACED CHANNEL N-5 POWER SUPPLY WITH SPARE UNIT
TECHNICAL SPECIFICA- TION TESTS	PREVENTIVE	NA	TESTS DUE	COMPLETED TESTS	NUCLEAR INSTRUMENTA- TION TESTS N-1 THROUGH N-9, WEEKLY FIRE AND BATTERY TESTS, SAFETY SYSTEM CHANNELS 1, 2, AND H <sub>2</sub> O #3, BI-WEEKLY RADIATION MONITOR TESTS
SECURITY SYSTEM	PREVENTIVE	NA	CLEAN AND TEST	COMPLETED P.M.	CLEANED AND TESTED EXPLOSIVE DETECTOR
1764 058					



NARRATIVE SUMMARY OF OPERATING EXPERIENCE

OCTOBER 1979

At the onset of the October reporting period, the plant was in a shutdown condition in order to replace the mechanical seal in the upper drive assembly of the control rod drive mechanism in Position No. 10. Excessive leakage from that seal had led to seal leak-off water accumulating on one of two solenoid operated hydraulic valves of this assembly causing the solenoid to short which then opened the hydraulic valve. The resultant movement of the scram accumulator piston led to low hydraulic system pressure which caused a partial scram. This action reduced the seal leakage, however, with subsequent rod withdrawal during rod scram testing, the leakage returned and it was necessary to shut down and cool down the reactor to accomplish seal repair. This occurred on September 28, 1979.

The reactor was taken critical at 2102 on October 6th, but was shut down at 0052 on October 7th due to excessive hydraulic oil leakage from Lower Control Rod Drive Assembly #21. Upon completion of repairs, the reactor was brought critical at 1430. The turbine generator was synchronized to the DPC grid at 1415 on October 8th, but response problems in the turbine governor control system led to the turbine-generator being taken off-line at 1445. The turbine-generator was reconnected to the DPC grid at 1755.

Power escalation continued until October 10th when 85% of Reactor Rated Thermal Power (40 MWe-Net) was reached. Power generation continued at this level throughout the remainder of the reporting period. This operating power level has been scheduled to stretch optimum production until March 1980 to extend core life.

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

1361 059