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 WILSON, D.L. Iowa Electric Light & Power Co.
 RECIP.NAME RECIPIENT AFFILIATION

DAVIS, A.B. Region 3 (Post 820201)

SUBJECT: Monthly operating rept for Aug 1991 for Duane Arnold Energy
 Ctr.W/910911 ltr.

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Iowa Electric Light and Power Company

September 11, 1991
DAEC-91-0730

Mr. A. Bert Davis
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License DPR-49
August 1991 Monthly Operating Report

Dear Mr. Davis:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for August 1991. The report has been prepared in accordance with the guidelines of NUREG-0020 and distribution has been made in accordance with DAEC Technical Specifications, Section 6.11.1.c.

Very truly yours,



David L. Wilson
Plant Superintendent - Nuclear

DLW/HT/pwj+
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OPERATING DATA REPORT

DOCKET NO. 050-0331
 DATE 09-15-91
 COMPLETED BY Hai Tran
 TELEPHONE (319) 851-7491

OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: August 1991
3. Licensed Thermal Power (MWt): 1658
4. Nameplate Rating (Gross MWe): 565 (Turbine)
5. Design Electrical Rating (Net MWe): 538
6. Maximum Dependable Capacity (Gross MWe): 565
7. Maximum Dependable Capacity (Net MWe): 538
8. If Changes Occur in Capacity Ratings (Items Number 3 through 7) Since the Last Report, Give Reasons: N/A
9. Power Level to Which Restricted, If Any (Net MWe): N/A
10. Reasons for Restrictions, If Any: N/A

	This Month	Yr-to-Date	Cumulative
11. Hours in Reporting Period	<u>744.0</u>	<u>5831.0</u>	<u>145343.0</u>
12. Number of Hours Reactor Was Critical	<u>744.0</u>	<u>5348.5</u>	<u>105859.3</u>
13. Reactor Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>192.8</u>
14. Hours Generator On-Line	<u>744.0</u>	<u>5270.9</u>	<u>102979.1</u>
15. Unit Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1218393.6</u>	<u>8547938.4</u>	<u>138269172.4</u>
17. Gross Electrical Energy Generated (MWH)	<u>399795.0</u>	<u>2805875.0</u>	<u>46359766.0</u>
18. Net Electrical Energy Generated (MWH)	<u>376185.1</u>	<u>2634987.5</u>	<u>43452688.7</u>
19. Unit Service Factor	<u>100.0</u>	<u>90.4</u>	<u>70.9</u>
20. Unit Availability Factor	<u>100.0</u>	<u>90.4</u>	<u>70.9</u>
21. Unit Capacity Factor (Using MDC Net)	<u>94.0</u>	<u>84.0</u>	<u>57.6</u>
22. Unit Capacity Factor (Using DER Net)	<u>94.0</u>	<u>84.0</u>	<u>55.6</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>4.1</u>	<u>13.4</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each: <u>Refuel Outage 11, March 1, 1992, 60 days</u>)			
25. If Shutdown at End of Report Period, Est. Date of Startup: <u>N/A</u>			

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
 DATE 09-15-91
 COMPLETED BY Hai Tran
 TELEPHONE (319) 851-7491

MONTH August 1991

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	511.0
2	507.0
3	509.0
4	505.0
5	515.0
6	511.0
7	508.0
8	510.0
9	504.0
10	414.0
11	489.0
12	510.0
13	515.0
14	513.0
15	511.0

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
16	512.0
17	510.0
18	504.0
19	512.0
20	516.0
21	512.0
22	513.0
23	512.0
24	511.0
25	496.0
26	509.0
27	509.0
28	507.0
29	507.0
30	506.0
31	507.0

REFUELING INFORMATION

DOCKET NO. 50-0331
DATE 09-15-91
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

1. Name of facility.
 - a. Duane Arnold Energy Center

2. Scheduled date for next refueling shutdown.
 - a. March 1, 1992

3. Scheduled date for restart following refueling.
 - a. May 1, 1992

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?

N/A

5. Scheduled date(s) for submitting proposed licensing action and supporting information.

N/A

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.

N/A

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.
 - a. 368
 - b. 1048

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. 2050 - Licensed Capacity or
 - b. 1898 under the presently installed storage rack capacity.

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.
 - a. 2000 - Licensed Capacity or
 - b. 1997 under the presently installed storage rack capacity.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: August 1991

Docket No.: 050-0331

Unit: Duane Arnold Energy Center

Date: 09-15-91

Completed By: Hai Tran

Telephone: (319) 851-7491

No.	Date	Type(1)	Duration (Hours)	Reason(2)	Method of Shutting (3) Down Reactor	Licensee Event Report #	System Code (4)	Comp. Code (5)	Cause
None									

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-Continued
5-Reduced Load
9-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

MAJOR/SAFETY RELATED MAINTENANCE

Docket No.: 050-0331
 Unit: Duane Arnold Energy Center
 Date: 09-15-91
 Completed By: Hai Tran
 Telephone: (319) 851-7491

DATE	SYSTEM	COMPONENT	DESCRIPTION
08-06-91	High Pressure Coolant Injection (HPCI) System	HPCI Inlet Steamline Differential Pressure Switch	The differential pressure switch was found operating improperly during routine surveillance testing. The switch was replaced.
08-06-91	Reactor Core Isolation Cooling (RCIC) System	RCIC Turbine Overspeed Monitor and Element	During the HPCI inoperability surveillance testing, the RCIC turbine overspeed monitor and element were found broken. Both instruments were replaced.
08-10-91	Turbine System	Moisture Separator Reheater	The moisture separator reheater was found to have a small leak in a seal weld. The leak was repaired.
08-15-91	Reactor Water Cleanup (RWCU) System	Return Flow Square Root Converter and Power Supply	A blown fuse was found in the power supply during the RWCU system isolation investigation. (See discussion of LER 91-009.)

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO. 050-0331
DATE 09-15-91
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

08-01-91 The plant was operating at 99.8% of rated thermal power delivering 511 MWe to the grid. There were three 10 CFR 50.73 reportable events during the month.

08-06-91 During routine surveillance testing, a primary containment isolation for the High Pressure Coolant Injection (HPCI) system steamline was inadvertently actuated by a station technician while installing a relay block. Further surveillance testing resulted in discovery of a non-functioning steamline high flow sensor in the HPCI isolation system. The HPCI system was declared inoperable. Subsequent required testing revealed a broken speed transmitter for the Reactor Core Isolation Cooling (RCIC) system turbine. The plant entered a twenty-four hour Limiting Condition for Operation (LCO) due to this event. Corrective actions included repair of the non-functioning switch and the broken transmitter. Additionally, personnel were reminded that extreme care must be used when installing relay blocks due to the close tolerances associated with them.

LER 91-007

08-07-91 At 0733 hours, with the plant operating at 100% power, the 'A' and 'B' Emergency Diesel Generators (EDG) automatically started but were not required to load. The cause for automatic starting of the EDGs was a momentary under-voltage condition on both emergency buses which was sensed by bus under-voltage relays that feed the EDGs' start logic. The cause for the under-voltage condition was cycling of two switchyard circuit breakers which supply off-site loads. The breakers cycled automatically due to a momentary disturbance during an electrical storm. Following verification that emergency bus voltages were at satisfactory levels, the EDGs were secured and returned to the standby mode. This event had no effect on the safe operation of the plant.

LER 91-008

08-10-91 At approximately 0627 hours, reactor power was reduced to approximately 56% power for a control rod sequence exchange and planned maintenance of a seal weld on the Moisture Separator Reheater. Both activities were complete on the same day without complications.

08-15-91 At approximately 1851 hours with the reactor operating at 100% power, a primary containment isolation system (reactor water cleanup system) isolation occurred. The reactor water cleanup pump and heat exchanger rooms were inspected for signs of leakage following the isolation. No leaks were found. A blown fuse in the power supply to the high differential flow circuit caused a square root converter to lose power. The root cause of the blown fuse in the power supply was the positioning clip, located in the back of the square root converter instrument drawer, which had bent upward slightly and contacted the square root converter cable connector. Corrective actions included repositioning the clip and fuse replacement. All automatic actions associated with the isolation occurred as designed.

LER 91-009

08-31-91 The plant was operating at 99.8% of rated thermal power delivering 507 MWe to the grid.