

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9105290205 DOC.DATE: 91/04/30 NOTARIZED: NO DOCKET #  
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 WILSON,D.L. Iowa Electric Light & Power Co.  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating rpt for Apr 1991 for Duane Arnold  
 Energy Ctr W/910515 ltr.

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Iowa Electric Light and Power Company

May 15, 1991  
DAEC-91-0416

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  
April 1991 Monthly Operating Report

Dear Mr. Davis:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for April 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  
Enclosures  
File A-118d

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# OPERATING DATA REPORT

DOCKET NO. 050-0331  
DATE 05-15-91  
COMPLETED BY Hai Tran  
TELEPHONE (319) 851-7491

## OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: April 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>719.0</u>	<u>2879.0</u>	<u>142391.0</u>
12. Number of Hours Reactor Was Critical	<u>719.0</u>	<u>2604.6</u>	<u>103115.4</u>
13. Reactor Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>192.8</u>
14. Hours Generator On-Line	<u>719.0</u>	<u>2551.8</u>	<u>100260.0</u>
15. Unit Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1178659.2</u>	<u>4109966.4</u>	<u>133831200.4</u>
17. Gross Electrical Energy Generated (MWH)	<u>389877.0</u>	<u>1367813.0</u>	<u>44921704.0</u>
18. Net Electrical Energy Generated (MWH)	<u>367438.4</u>	<u>1284692.3</u>	<u>42102393.5</u>
19. Unit Service Factor	<u>100.0</u>	<u>88.6</u>	<u>70.4</u>
20. Unit Availability Factor	<u>100.0</u>	<u>88.6</u>	<u>70.5</u>
21. Unit Capacity Factor (Using MDC Net)	<u>95.0</u>	<u>82.9</u>	<u>57.0</u>
22. Unit Capacity Factor (Using DER Net)	<u>95.0</u>	<u>82.9</u>	<u>55.0</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>5.6</u>	<u>13.7</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each: <u>N/A</u> )			
25. If Shutdown at End of Report Period, Est. Date of Startup: <u>N/A</u>			

(9/77)

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331  
DATE 04-15-91  
COMPLETED BY Hai Tran  
TELEPHONE (319) 851-7491

MONTH April 1991

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	<u>499.0</u>
2	<u>516.0</u>
3	<u>513.0</u>
4	<u>512.0</u>
5	<u>511.0</u>
6	<u>511.0</u>
7	<u>469.0</u>
8	<u>508.0</u>
9	<u>517.0</u>
10	<u>519.0</u>
11	<u>519.0</u>
12	<u>518.0</u>
13	<u>519.0</u>
14	<u>504.0</u>
15	<u>515.0</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

16	<u>515.0</u>
17	<u>529.0</u>
18	<u>515.0</u>
19	<u>525.0</u>
20	<u>468.0</u>
21	<u>519.0</u>
22	<u>510.0</u>
23	<u>525.0</u>
24	<u>518.0</u>
25	<u>512.0</u>
26	<u>507.0</u>
27	<u>506.0</u>
28	<u>491.0</u>
29	<u>505.0</u>
30	<u>511.0</u>
31	<u>N/A</u>

REFUELING INFORMATION

DOCKET NO. 50-0331  
DATE 05-15-91  
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: April 1991

Docket No.: 050-0331

Unit: Duane Arnold Energy Center

Date: 05-15-91

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 1-  
Same Source

MAJOR/SAFETY RELATED MAINTENANCE

Docket No.: 050-0331  
 Unit: Duane Arnold Energy Center  
 Date: 05-15-91  
 Completed By: Hai Tran  
 Telephone: (319) 851-7491

DATE	SYSTEM	COMPONENT	DESCRIPTION
04-10-91	Emergency Diesel Generator (EDG) Air Compressor	Unloader Valve	Air was found leaking from the unloader valve. The unloader valve cover, tubing, and fitting were replaced. Leakage test was performed and the results were satisfactory.
04-15-91	Reactor Core Isolation Cooling System (RCIC)	RCIC Discharge Line Pressure Switch	The pressure switch was replaced with a new one per design change package.
04-20-91	High Pressure Coolant Injection System (HPCI)	HPCI Discharge Flow Transmitter	The flow transmitter was found operating improperly in the zero range. The flow transmitter was calibrated, cleaned, and returned to service satisfactorily.
04-20-91	Steam Extraction System	Pipe Hanger	The pipe hanger was found broken and repaired.
04-20-91	Residual Heat Removal Service Water System (RHRSW)	RHRSW 'C' Pump	The pump failed during the HPCI operability surveillance. Pump maintenance was completed on 5-5-91.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO. 050-0331  
DATE 05-15-91  
COMPLETED BY Hai Tran  
TELEPHONE (319) 851-7491

- 04-01-91 At the beginning of the month the plant was operating at 95.3% of rated thermal power delivering 499.0 MWe to the grid. There was no 10 CFR 50.73 reportable event during the month.
- 04-20-91 The plant entered a 30-day limiting condition for operation due to failure of the 'C' pump of the Residual Heat Removal Service Water system during the High pressure Coolant Injection system operability test.
- 04-30-91 At the end of the month the plant was operating at 99.7% of rated thermal power delivering 511.0 MWe to the grid.