



Duane Arnold Energy Center  
2277 DAEC Road  
Fair, IA 52324  
Telephone 319 851 7611  
Fax 319 851 7611

September 13, 1996  
NG-96-1913

Mr. A. Bill Beach  
Regional Administrator  
Region III  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60532-4351

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Operating License: DPR-49  
August 1996 Monthly Operating Report  
File: A-118d

Dear Mr. Beach:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for August 1996. 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,

A handwritten signature in cursive script that reads "Gary Van Middlesworth".

Gary Van Middlesworth  
Plant Manager-Nuclear

GDV/RBW

Enclosures

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Mr. A. Bill Beach  
NG-96-1713  
September 13, 1996  
Page 2 of 2

cc:

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-37  
Washington, DC 20555-0001 (Orig.)

Mr. Glenn Kelly  
Project Manager  
1 Whiteflint North  
Mail Stop 13E21  
11555 Rockville Pike  
Rockville, MD 20852

Document Control Desk  
INPO Records Center  
700 Galleria Parkway  
Atlanta, GA 30339-5957

Ms. Lisa Stump  
Iowa State Utilities Board  
Lucas State Office Building  
Des Moines, IA 50319

Mr. Fred Yost  
Director, Research Services  
Utility Data Institute  
1700 K St. NW, Suite 400  
Washington, DC 20006

Mr. Dennis Murdock  
Central Iowa Power Cooperative  
Box 2517  
Cedar Rapids, IA 52406

Dr. William A. Jacobs, Jr.  
GDS Associates, Inc.  
Suite 720  
1850 Parkway Place  
Marietta, GA 30068-8237

Mr. Dale Arends  
Corn Belt Power Cooperative  
1300 13th Street North  
Humboldt, IA 50548

DOCU

NRC Resident Inspector

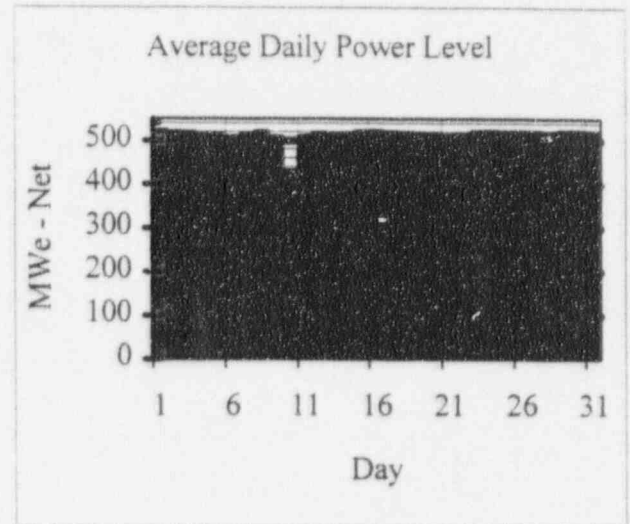
Mr. Al Gutterman  
Morgan, Lewis, Bockius  
1800 M St. NW  
Washington, DC 20036-5859

# OPERATING DATA REPORT

DOCKET NO: 50-0331  
 DATE: 09/13/96  
 Unit: Duane Arnold Energy Center  
 COMPLETED BY: Richard Woodward  
 TELEPHONE: (319) 851-7318

## OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: August 1996
3. Licensed Thermal Power ( $MW_{th}$ ): 1658
4. Nameplate Rating (Gross  $MW_e$  DER): 565.7 (Turbine)
5. Design Electrical Rating (Net  $MW_e$  DER): 538
6. Maximum Dependable Capacity (Gross  $MW_e$  MDC): 550
7. Maximum Dependable Capacity (Net  $MW_e$  MDC): 520
8. If Changes Occur in Capacity Ratings (Items Number 3 through 7) since the last report, Give Reasons: Not Applicable
9. Power Level to Which Restricted, If Any (Net  $MW_e$ ): Not Applicable
10. Reasons for Restrictions, If Any: Not Applicable



	August-96	1996	Cummulative
11. Hours in Reporting Period	744.0	5,855.0	189,191.0
12. Number of Hours Reactor Was Critical	744.0	5,855.0	144,380.8
13. Reactor Reserve Shutdown Hours	0.0	0.0	192.8
14. Hours Generator On-Line	744.0	5,855.0	140,968.8
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,224,978.1	9,255,041.7	198,516,256.1
17. Gross Electrical Energy Generated (MWH)	407,625.0	3,119,471.0	66,531,441.6
18. Net Electrical Energy Generated (MWH)	384,572.1	2,942,311.7	62,419,326.3
19. Unit Service Factor	100.0%	100.0%	74.5%
20. Unit Availability Factor	100.0%	100.0%	74.5%
21. Unit Capacity Factor (Using MDC Net)	99.4%	96.6%	69.6%
22. Unit Capacity Factor (Using DER Net)	96.1%	93.4%	66.6%
23. Unit Forced Outage Rate	0.0%	0.0%	10.4%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): Refueling, 10/11/96, 30 days
25. If Shutdown at End of Report Period, Estimated Date of Startup: N/A

# AVERAGE DAILY UNIT POWER LEVEL

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MONTH August 1996

Day	Average Daily Power Level (MWe-Net)
1	525.0
2	521.9
3	520.5
4	517.2
5	514.8
6	510.9
7	516.5
8	522.1
9	510.4
10	433.6
11	513.1
12	519.6
13	518.2
14	518.4
15	523.0
16	523.8
17	521.7
18	519.9
19	518.8
20	518.5
21	514.3
22	516.7
23	523.3
24	523.8
25	522.6
26	522.3
27	522.4
28	520.7
29	523.7
30	523.7
31	522.5

# REFUELING INFORMATION

DOCKET NO: 50-0331  
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 TELEPHONE: (319) 851-7318

**1. Name of facility.**

Duane Arnold Energy Center

**2. Scheduled date for next refueling shutdown.**

Refuel Outage XIV to begin October 11, 1996.

**3. Scheduled date for restart following refueling.**

November 11, 1996

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

Yes

RTS 269, T.S. 3.7, "Plant Containment Systems"

RTS 288, T.S. 2.1, 3.2, "Reactor Water Clean-up Systems Vessel Level Isolation Set-Point Change"

RTS 290, T.S. 3.6, "Reactor Water Conductivity Limit Change in Table 3.6.B.2-1"

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

RTS 269, submitted December 22, 1995

RTS 288, submitted January 18, 1996, Approved Amendment No. 217 received August 8, 1996

RTS 290, submitted July 5, 1996

**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.**

No

**7. Current and projected fuel assemblies inventory:**

	Number of Fuel Assemblies	Projected date of last refueling that can be discharged (after allowing margin for maintenance of continuous full-core discharge capability)
Installed in reactor core (following refueling)	368	n/a
Previously discharged from core to Spent Fuel Storage Pool	1408	n/a
Discharged from core to Spent Fuel Storage Pool (following Fall 1996 refueling)	1528	n/a
Installed capacity of Spent Fuel Storage Pool	2411	2001
Licensed Capacity of Spent Fuel Storage Pool (with reracking)	2829	2006
Licensed Capacity of Spent Fuel Storage Pool and Cask Pool (with reracking)	3152	2010

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UNIT SHUTDOWNS AND POWER REDUCTIONS  
 REPORT MONTH: August 1996

No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	System Code (4)	Comp. Code (5)	Cause
10	August 10 - 12	S	0 (5.4 full- power- hours equivalent)	B	5	n/a	n/a	n/a	Turbine Control Valve testing Control Rod Exercises Scram Solenoid Valve testing

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)

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# Monthly Operational Overview for August 1996:

The DAEC operated at full thermal power throughout the month except:

- on August 10-12, to perform scheduled Scram Time Testing, Turbine Control Valve Testing, and Control Rod Drive manipulations: 5.4 full-power-hours (equivalent) lost.
- on August 9, 17, 25, 28 and 31, to reduce recirculation flow to withdraw a control rod.

Total forgone production was the equivalent of 23.4 full-power hours of operation, including other small losses.

At the end of the month the Duane Arnold Energy Center had operated 453 consecutive days, its best-ever continuous operating run.

Allocation of Production & Losses:	Electrical Output MWe	Capacity Factor % of 565.7 MWe (Design Gross Rating)	Full Power Equivalent Hours
Actual Metered Net Electric Output	516.9	91.4%	679.8
Actual Metered Plant Electric Loads	31.0	5.5%	40.8
Load Following	0.0	0.0%	0.0
Off-Line	0.0	0.0%	0.0
Weather losses, ie., condenser pressure >2.75 In Hg / Circ Water Temp > 74.5 °F	7.8	1.4%	10.3
Planned Capacity Losses: August 9, 10-12, 17, 25, 28 & 31	4.9	0.9%	6.5
Unplanned Capacity Losses: none	0.0	-0.1%	0.0
Normal Capacity Losses (Avg MWth < 1658)	0.6	0.1%	0.8
Metering Losses (Avg indic MWe - Avg MWHe)	1.6	0.3%	2.1
Efficiency Losses (Weather-Norm-Full-Power-MWe < 565.7)	2.8	0.5%	3.7
<b>Design Gross Electric Output</b>	<b>565.7</b>	<b>100.0%</b>	<b>744.0</b>

There were no Licensee Event Reports.

## Licensing Action Summary:

Plant Availability: 100.0%      Unplanned Auto Scrams (while/critical) this month: 0  
 Number of reportable events: 0      Unplanned Auto Scrams (while/critical) last 12 months: 0