Duane Arnold Energy Center
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IES UTILITIES

April 12, 1996
NG-96-0825

Mr. Hubert J. Miller
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
March 1996 Monthly Operating Report

Dear Mr. Miller:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for March 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,

Gary Van Middlesworth

Gary Van Middlesworth
Plant Manager, Nuclear

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1/1

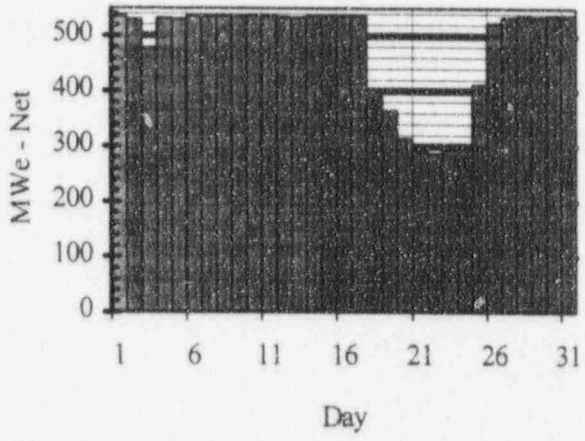
OPERATING DATA REPORT

DOCKET NO: 50-0331
DATE: 04/12/96
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: March 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

Average Daily Power Level



		March-96	1996	Cummulative
11.	Hours in Reporting Period	744.0	2,184.0	185,520.0
12.	Number of Hours Reactor Was Critical	744.0	2,184.0	140,709.8
13.	Reactor Reserve Shutdown Hours	0.0	0.0	192.8
14.	Hours Generator On-Line	744.0	2,184.0	137,297.8
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,117,415.6	3,400,394.1	192,661,608.5
17.	Gross Electrical Energy Generated (MWH)	379,761.0	1,159,186.0	64,571,156.6
18.	Net Electrical Energy Generated (MWH)	357,673.2	1,093,162.2	60,570,176.8
19.	Unit Service Factor	100.0%	100.0%	74.0%
20.	Unit Availability Factor	100.0%	100.0%	74.0%
21.	Unit Capacity Factor (Using MDC Net)	92.5%	96.3%	68.9%
22.	Unit Capacity Factor (Using DER Net)	89.4%	93.0%	66.0%
23.	Unit Forced Outage Rate	0.0%	0.0%	10.6%

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

AVERAGE DAILY UNIT POWER LEVEL

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MONTH March 1996

Day	Average Daily Power Level (MWe-Net)
1	536.2
2	530.0
3	478.5
4	532.6
5	530.6
6	536.5
7	535.8
8	536.8
9	535.6
10	536.5
11	537.0
12	534.5
13	533.8
14	536.2
15	536.9
16	536.2
17	536.4
18	400.2
19	364.7
20	314.3
21	290.8
22	287.3
23	295.0
24	298.5
25	411.8
26	523.7
27	534.1
28	536.4
29	534.6
30	536.5
31	535.4

REFUELING INFORMATION

DOCKET NO: 50-0331
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Unit: Duane Arnold Energy Center
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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 10, 1996.

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

   November 14, 1996

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

   Yes
   RTS 269, T.S. 3.2, "Plant Containment Systems"
   RTS 288, T.S. 2.1, 3.2, "Reactor Water Clean-up Systems Vessel Level Isolation Set-Point Change"

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

   RTS 269, submitted December 22, 1995
   RTS 288, submitted January 18, 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
Installed in reactor core (following refueling)	368	n/a
Previously discharged from core to Spent Fuel Storage Pool (following refueling)	1408	n/a
Under present physical capacity of Spent Fuel Storage Pool	2411	2007
Under Licensed Capacity of Spent Fuel Storage Pool	3152	2014

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UNIT SHUTDOWNS AND POWER REDUCTIONS
REPORT MONTH: March 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
3	March. 2 - 3	S	0 (3.7 full-power-hours equivalent)	B	5	n/a	SJ (Feedwater System)	PSP (Pipe Spool)	Turbine Valve Testing, repair steam leak on drain line from extraction steam to 3A Feedwater Heater
4	March 18 - 26	S	0 (69.5 full power hours equivalent)	B	5	LER 96-001	AA (Control Rod Drive System)	FSV Valve, Solenoid, Flow	In response to an industry concern regarding the Viton diaphragm material used in the Scram Solenoid Pilot Valves, performed individual testing and parts replacement while on-line. This required a week-long effort and many plant and equipment manipulations.

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 March 1996 :

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

- March 2 - 3, to perform scheduled Turbine Control Valve (TCV) surveillance testing, 2.7 full-power-hours (equivalent) lost.
- March 3, to repair a steam leak from an extraction steam line to the 3A Feedwater Heater, 1.0 full-power-hours (equivalent) lost.
- March 18 - 26, to perform scram-time testing and parts replacement on the Scram Solenoid Pilot Valves (SSPVs). This was in response to an industry concern regarding the Viton diaphragm material used in the SSPVs. It required a week-long effort and many plant and equipment manipulations while on-line. 69.5 full-power-hours (equivalent) lost.
  LER 96-001 (pending, voluntary)

Total forgone production (including other small planned losses) was the equivalent of 77.4 full-power hours of operation.

At the end of the month the Duane Arnold Energy Center had operated 300 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	480.7	85.0%	632.3
Actual Metered Plant Electric Loads	29.7	5.2%	39.0
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	-3.5	-0.5%	-4.7
Planned Capacity Losses: TCV Testing 3/2-3, SSPV maintenance 3/18-26	54.9	9.7%	72.2
Unplanned Capacity Losses: Extraction Steam Line Repair 3/3	0.8	0.1%	1.0
Normal Capacity Losses (Avg MWth < 1658)	0.2	0.0%	0.2
Metering Losses (Avg indic MWe - Avg MWHe)	2.4	0.4%	3.2
Efficiency Losses (Weather-Norm-Full-Power-MWe < 565.7)	0.6	0.1%	0.8
Design Gross Electric Output	565.7	100.0%	744.0

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:	1