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March 10, 2000

NG-00-0408

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
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Subject: Duane Arnold Energy Center
Docket No: 50-331
Operating License: DPR-49
February 2000 Monthly Operating Report
File: A-118d

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for February 2000. The report has been prepared in accordance with the guidelines of NRC Generic Letter 97-02: Revised Contents Of The Monthly Operating Report, and distribution has been made in accordance with DAEC Technical Specifications, Section 5.6.4.

Very truly yours,

Richard L. Anderson
Plant Manager-Nuclear

RLA/RBW

Enclosures

IE24

NG-00-0408
March 10, 2000
Page 2 of 2

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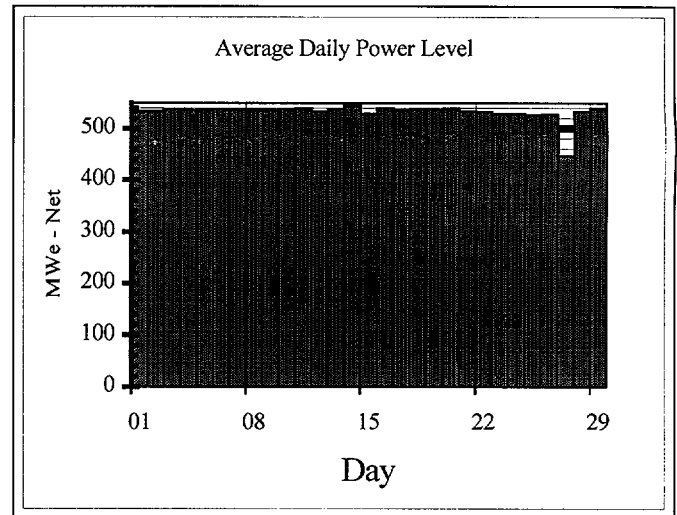
CTS Project - *Licensing*

OPERATING DATA REPORT

DOCKET NO: 50-331
 DATE: 03/10/2000
 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: February 2000
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): N/A
10. Reasons for Restrictions, If Any: N/A



	February-00	2000	Cumulative
11. Hours in Reporting Period	696.0	1,440.0	219,840.0
12. Number of Hours Reactor Was Critical	696.0	1,341.7	171,079.2
13. Reactor Reserve Shutdown Hours	0.0	0.0	192.8
14. Hours Generator On-Line	696.0	1,322.5	167,218.3
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,146,847.2	2,172,321.2	240,562,686.2
17. Gross Electrical Energy Generated (MWH)	391,649.0	740,898.0	80,668,759.6
18. Net Electrical Energy Generated (MWH)	370,422.5	700,665.1	75,759,949.2
19. Unit Service Factor	100.0%	91.8%	76.1%
20. Unit Availability Factor	100.0%	91.8%	76.1%
21. Unit Capacity Factor (Using MDC Net)	102.3%	93.6%	72.4%
22. Unit Capacity Factor (Using DER Net)	98.9%	90.4%	69.3%
23. Unit Forced Outage Rate	0.0%	8.2%	9.0%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): None
25. If Shutdown at End of Report Period, Estimated Date of Startup: N/A

AVERAGE DAILY UNIT POWER LEVEL

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MONTH February 2000

Day	Average Daily Power Level (MWe-Net)
1	534.2
2	534.6
3	537.1
4	535.4
5	536.8
6	538.5
7	537.1
8	536.4
9	536.0
10	537.0
11	539.3
12	533.4
13	537.8
14	544.3
15	529.1
16	539.8
17	535.8
18	537.5
19	537.9
20	539.5
21	534.3
22	532.2
23	529.1
24	528.9
25	525.9
26	527.7
27	445.8
28	533.2
29	539.5
30	#N/A
31	#N/A

REFUELING INFORMATION

DOCKET NO: 50-331
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1. **Name of facility.** Duane Arnold Energy Center
2. **Scheduled date for next refueling shutdown.** Spring, 2001
3. **Scheduled date for restart following refueling.** Summer, 2001
4. **Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?** Yes, as part of the Extended Power Uprate Project.
5. **Scheduled date(s) for submitting proposed licensing action and supporting information.**
October, 2000.
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.** General Electric 14 fuel design, Maximum Extended Load Line Limit Analysis (MELLA).
7. **Current 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 into reactor core	368	N/A
Discharged from core to Spent Fuel Storage Pool	1776	N/A
Installed Capacity of Spent Fuel Storage Pool	2411	2001
Licensed Capacity of Spent Fuel Storage Pool (with reracking)	2829	2007
Licensed Capacity of Spent Fuel Storage Pool and Cask Pool (with reracking)	3152	2011

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UNIT SHUTDOWNS AND POWER REDUCTIONS							
REPORT MONTH: February 2000							
No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause
2	02/26 23:00 - 02/27 22:30	S	0 (3.83 Full-Power-Hours equivalent)	B	5	N/A	Sequence Exchange

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)
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Monthly Operational Overview for February 2000

At the beginning of the month the DAEC had operated 21 days since the startup following the January 5 scram. Out of the 696 clock hours available during the month of February, the DAEC generated all but 3.7 full-power-hours equivalent. The only departures from licensed limited full thermal power were to reduce recirculation flow to pull control rods on February 1st, 28th, and 29th; to perform a sequence exchange February 26th and 27th; and to remove the plant process computer for maintenance on February 12th.

Maintenance continued throughout the month on four cooling tower cells which have remained out-of-service for maintenance since startup from Refuel Outage 16 December 1st. Debris in the Low Pressure Condenser waterboxes has reduced Circulating Water System flow to 240,000 GPM (down from a normal flow of 260,000 GPM.) The combined effect of these two efficiency losses has been to reduce plant output by about 6 MWe. However, cooler (than design) winter weather reduced condenser inlet temperatures enough to offset practically all of these efficiency losses.

Allocation of Production & Losses:

	Electrical Output MWe	Capacity Factor % of 565.7 MWe (Design Rating)	Full Power Equivalent Hours (FPHeq)
Sequence Exchange 02/26 23:00 - 02/27 22:30	3.11	0.55%	3.83
Plant Process Computer & Feedwater Correction Factor out of service: 02/12 12:25 - 22:00	0.11	0.02%	0.11
Rod Pulls: 02/01 01:00 - 03:00, 02/28 04:00 - 05:25, 02/29 01:00 - 02:30	0.06	0.01%	0.06
Maintain Margin to 1658 MWth Limit	0.11	0.02%	0.11
Subtotal: On-line Capacity Losses	3.34	0.59%	4.11
Cooling Tower Losses	4.00	0.71%	4.94
Circ Water System Flow Limitation	2.00	0.35%	2.44
Estimate of tentative adjustment in Rated MWe	(6.34)	-1.12%	(7.79)
Subtotal: On-line Efficiency Losses	(.34)	0.06%	(.41)
Weather Losses i.e., weather gains (turbine exhaust pressure/condenser inlet temperature > design)	0.00	0.00%	0.00
Total On-line Losses	3.00	0.53%	3.70
Avg. Net Electric Output (while on-line)	562.70	99.47%	692.30
Plant Electric Loads (while on-line)	0.00	0.00%	0.00
Total Electric Generation	562.70	99.47%	692.30
Off-Line Losses:	0.00	0.00%	0.00
Design Electric Rating, Total %, Total # of clock-hours	565.70	100.00%	696.00

(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:	1
		Main Steam Safety and Relief Valve Challenges:	0