



Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324-9785

Operated by Nuclear Management
Company LLC

October 10, 2000

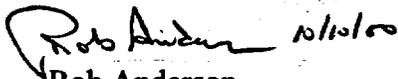
NG-00-1716

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

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

 10/10/00

Rob Anderson
Plant Manager-Nuclear

RA/RBW

Enclosures

IE24

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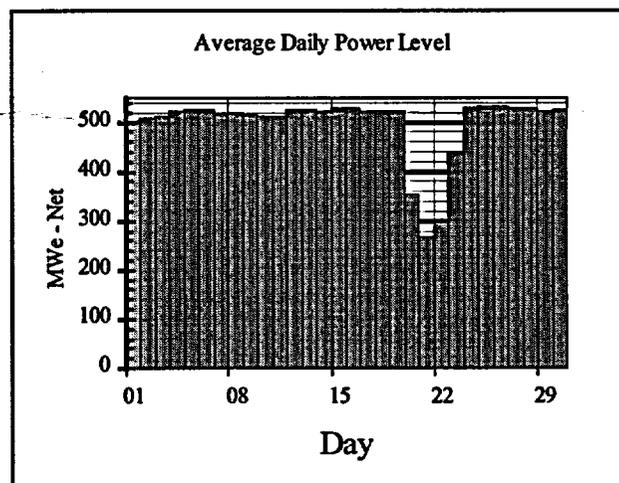
DOCU
NRC Resident Inspector
CTS Project

OPERATING DATA REPORT

DOCKET NO: 50-331
 DATE: 10/10/2000
 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: September 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



	September-00	2000	Cumulative
11. Hours in Reporting Period	720.0	6,575.0	224,975.0
12. Number of Hours Reactor Was Critical	720.0	6,434.6	176,172.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	720.0	6,345.4	172,241.2
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,139,874.1	10,407,984.6	248,798,349.6
17. Gross Electrical Energy Generated (MWH)	379,771.0	3,487,533.0	83,415,394.6
18. Net Electrical Energy Generated (MWH)	358,246.7	3,294,308.0	78,353,592.1
19. Unit Service Factor	100.0%	96.5%	76.6%
20. Unit Availability Factor	100.0%	96.5%	76.6%
21. Unit Capacity Factor (Using MDC Net)	95.7%	96.4%	73.2%
22. Unit Capacity Factor (Using DER Net)	92.5%	93.1%	70.0%
23. Unit Forced Outage Rate	0.0%	3.5%	8.9%

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

DOCKET NO: 50-331

DATE: 10/10/2000

Unit: Duane Arnold Energy Center

COMPLETED BY: Richard Woodward

TELEPHONE: (319) 851-7318

MONTH September 2000

Day	Average Daily Power Level (MWe-Net)
1	497.4
2	507.2
3	512.9
4	522.7
5	526.4
6	526.2
7	519.4
8	518.4
9	515.1
10	513.4
11	512.8
12	526.9
13	525.8
14	523.6
15	529.2
16	528.8
17	523.8
18	521.3
19	522.5
20	353.0
21	269.2
22	298.8
23	435.0
24	527.7
25	533.4
26	531.6
27	528.3
28	528.6
29	523.2
30	524.3
31	#N/A

REFUELING INFORMATION

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 DATE: 10/10/2000
 Unit: Duane Arnold Energy Center
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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?**
 - a. Safety Limit MCPR change
 - b. Standby Liquid Control - Sodium Pentaborate Concentration change
5. **Scheduled date(s) for submitting proposed licensing action and supporting information.**
 - a. January 2001
 - b. September 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.** GE 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: September 2000

No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause
8	09/20 09:00 - 09/24 00:00	F	0 (31.75 full-power-hours equivalent)	B	5		'B' Feed Pump Casing Leak Repair

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 September 2000

At the beginning of the month the DAEC had operated 63 days since its most recent shutdown and startup. Hot-weather related high-condenser back-pressure alarms required power to be reduced by 3% - 4% for twelve hours on September 1st and by 1% for four hours on September 2nd. On September 9th power was reduced 2% to perform a control rod adjustment.

At 09:00 on September 20th power was reduced to 50% in order to remove the 'B' Reactor Feed Pump from service following discovery of a leaking casing bolt. Following leak repair and return of the pump to service, new casing bolt leaks developed on September 21st, and then again on September 22nd. Removing the feed pump from service to repair these leaks required power to be reduced from 55% to 50% on the 21st, and from 85% to 50% on the 22nd. This additional leakage requiring further work was not unexpected. No further leaks were noted following the third repair. Following the repairs power was increased to 99% at 02:00 September 24th. Two one-hour 1% power reductions occurred on the 24th to adjust control rods, and power was reduced ½% for two hours on the 29th to perform CRD exercises.

Allocation of Production & Losses: September 2000			
	Electrical Output MWe	Capacity Factor % of 571 MWe (Target Output)	Full Power Equivalent Hours (FPHeq)
Capacity Losses:			
High Condenser Back Pressure Vacuum Alarm: 09/01 11:35 - 23:16, 09/02 19:57- 23:54	0.25	0.04%	0.31
Control Rod Adjustment: 09/09 00:30 - 02:00, 09/15 20:00 - 20:45, 09/24 05:00 - 13:00, 09/24 23:39 - 09/25 00:45, 09/29 22:30 - 09/30 01:50	0.09	0.02%	0.11
'B' Feed Pump Casing Leak Repair: 09/20 09:00 - 09/24 00:00	25.18	4.41%	31.75
Maintain Margin to 1658 MWth Limit	0.19	0.03%	0.24
Efficiency Losses:			
Circ Water System Flow Limitation	3.00	0.53%	3.82
Cooling Tower Low Flow condition	4.95	0.87%	6.26
Steam Cycle Isolation Valve Losses: BV-1	2.30	0.40%	2.88
Other steam cycle isolation losses	0.60	0.11%	0.79
Unidentified Losses	0.27	0.04%	0.25
Average Weather Losses:	+6.74	+1.18%	+8.50
Total On-line Losses:	43.57	7.63%	54.91
Off-Line Losses:	0.00	0.00%	0.00
Electric Generation:			
Plant House Loads (while on-line)	29.86	5.23%	37.69
Net Electric Output	+497.57	+87.14%	+627.40
Gross Electric Generation	527.43	92.37%	665.09
Target Electric Output, Total %, Total # of clock-hours	571.00	100.00%	720.00

There were no Licensee event reports submitted for September 2000.

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:	2
		Main Steam Safety and Relief Valve Challenges this month:	0