



Duane Arnold Energy Center  
3313 DAEC Road  
Palo, IA 52324-9646

Operated by Nuclear Management Company, LLC

December 11, 2000

NG-00-2000

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Washington, DC 20555-0001

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Operating License: DPR-49  
November 2000 Monthly Operating Report  
File: A-118d

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

*Rob Anderson 12/7/00*

Rob Anderson  
Plant Manager-Nuclear

RA/RBW

Enclosures

*IE24*

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CTS Project



AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-331  
 DATE: 12/11/2000  
 Unit: Duane Arnold Energy Center  
 COMPLETED BY: Richard Woodward  
 TELEPHONE: (319) 851-7318

MONTH November 2000

Day	Average Daily Power Level (MWe-Net)
1	517.2
2	525.4
3	529.9
4	531.4
5	530.3
6	524.6
7	526.7
8	534.6
9	532.7
10	534.0
11	537.3
12	532.6
13	535.1
14	535.0
15	535.9
16	532.3
17	535.7
18	534.8
19	533.9
20	533.1
21	534.2
22	535.6
23	536.4
24	538.2
25	535.5
26	535.6
27	539.5
28	531.3
29	533.9
30	535.2
31	#N/A

## REFUELING INFORMATION

DOCKET NO: 50-331  
 DATE: 12/11/2000  
 Unit: Duane Arnold Energy Center  
 COMPLETED BY: Richard Woodward  
 TELEPHONE: (319) 851-7318

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: November 2000**

(There were no power reductions > 20% during the month.)

No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause

<b>1 - F: Forced</b> <b>S: Scheduled</b>	<b>2 - Reason</b> 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)	<b>3 - Method:</b> 1-Manual 2-Manual Scram 3-Automatic Scram 4-Continued 5-Reduced Load 9-Other (Explain)
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Monthly Operational Overview for November 2000

The DAEC operated nearly continuously at 100% licensed rated thermal power, except for brief power reductions to adjust control rods November 2<sup>nd</sup>, 3<sup>rd</sup>, and 9<sup>th</sup>, and to perform maintenance on the plant process computer November 7<sup>th</sup>. Above average wet bulb temperatures during the period from November 1<sup>st</sup> until the 6<sup>th</sup> also limited gross electric output to slightly less than rated. However, cooler temperatures throughout the remainder of the month helped DAEC to achieve 5<sup>th</sup> highest monthly capacity factor ever.

At the end of the month the plant had operated 155 consecutive days since completing its most recent shutdown.

<b>Allocation of Production &amp; Losses: November 2000</b>			
	Electrical Output MWe	Capacity Factor % of 571 MWe (Target Output)	Full Power Equivalent Hours (FPHeq)
<b>Capacity Losses:</b>			
Control Rod Adjustments: 11/02 22:15 - 22:40, 11/03 21:03 - 23:25, 11/09 22:32 - 11/10 01:00	0.21	0.04%	0.27
Plant Process Computer, date change and maintenance: 11/07 09:17 - 11/08 01:00	0.25	0.04%	0.32
Maintain Margin to 1658 MWth Limit	0.25	0.04%	0.31
<b>Efficiency Losses:</b>			
Circ Water System Flow Limitation	2.38	0.42%	3.02
Cooling Tower Low Flow condition	4.03	0.71%	5.11
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	(0.02)	(0.01%)	(0.07)
<b>Average Weather Losses (Gains):</b>			
	(2.86)	(0.50%)	(3.60)
<b>Total On-line Losses:</b>	<b>7.14</b>	<b>1.25%</b>	<b>9.03</b>
<b>Off-Line Losses:</b>			
	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>
<b>Electric Generation:</b>			
Plant House Loads (while on-line)	30.89	5.41%	38.97
<b>Net Electric Output</b>	<b>532.91</b>	<b>93.33%</b>	<b>672.00</b>
<b>Gross Electric Generation</b>	<b>563.86</b>	<b>98.75%</b>	<b>710.97</b>
<b>Target Electric Output, Total %, Total # of clock-hours</b>	<b>571.00</b>	<b>100.00%</b>	<b>720.00</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:	2
		Main Steam Safety and Relief Valve Challenges this month:	0