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

Operated by Nuclear Management Company, LLC

August 10, 2001

NG-01-0948

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station 0-P1-17
Washington, DC 20555-0001

Subject: Duane Arnold Energy Center
Docket No: 50-331
Operating License: DPR-49
July 2001 Monthly Operating Report
File: A-118d

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for July 2001. 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,

Dean Curtland

Rob Anderson
Plant Manager-Nuclear

RA/RBW

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IE24

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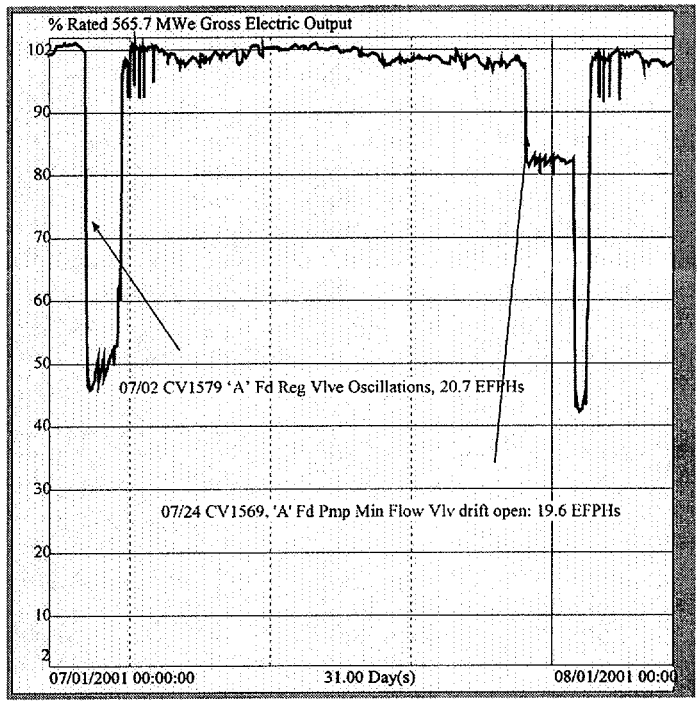
CTS Project

OPERATING DATA REPORT

DOCKET NO: 50-331
DATE: 08/10/2001
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: July 2001
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



		Jul-01	2001	Cumulative
11.	Hours in Reporting Period	744.0	5,087.0	232,271.0
12.	Number of Hours Reactor Was Critical	744.0	4,101.1	182,482.1
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator On-Line	744.0	4,022.0	178,472.2
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,169,865.8	6,348,952.8	258,777,455.5
17.	Gross Electrical Energy Generated (MWH)	393,876.0	2,127,482.0	86,771,929.6
18.	Net Electrical Energy Generated (MWH)	371,033.1	2,006,814.2	81,521,804.3
19.	Unit Service Factor	100.0%	79.1%	76.8%
20.	Unit Availability Factor	100.0%	79.1%	76.8%
21.	Unit Capacity Factor (Using MDC Net)	95.9%	75.9%	73.6%
22.	Unit Capacity Factor (Using DER Net)	92.7%	73.3%	70.5%
23.	Unit Forced Outage Rate	0.0%	0.0%	8.6%

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 July 2001

Day	Average Daily Power Level (MWe-Net)
1	536.9
2	485.0
3	251.3
4	379.8
5	532.5
6	532.3
7	524.6
8	526.8
9	528.3
10	525.9
11	536.6
12	534.6
13	535.7
14	536.2
15	533.5
16	532.3
17	526.0
18	520.5
19	526.4
20	523.4
21	525.3
22	523.1
23	520.7
24	496.1
25	435.5
26	434.9
27	299.7
28	522.5
29	528.2
30	524.9
31	520.3

REFUELING INFORMATION

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1. **Name of facility.** Duane Arnold Energy Center

2. **Scheduled date for next refueling shutdown.** Spring 2003

3. **Scheduled date for restart following refueling.** Spring 2003

4. **Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? No**

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

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. N/A**

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	
Discharged from core to Spent Fuel Storage Pool	1912	
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: July 2001

No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause
7	07/02/01	F	0 (20.7 full-power-hours equivalent)	B	5		Repair 'A' Feedwater Regulating Valve
8	07/24/01	F	0 (19.6 full-power-hours equivalent)	B	5		'A' Feedpump Minimum Flow Valve

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 July 2001

At the beginning of July, the DAEC was thirty-four days into Fuel Operating Cycle 18, operating at licensed limited thermal power.

On July 2nd at 18:50, oscillations of the 'A' Feedwater Regulating Valve resulted in a reduction in vessel level. Operators first rapidly reduced recirculation flow to bring power from 100% to 74%, then followed by inserting control rods to bring power down to 52%. The 'A' Feedwater Pump was removed from service to facilitate the investigation into the cause of the flow oscillations. A rebuilt positioner, new lever arms and diaphragm were installed and tested. A work order was written to replace a degraded (but still within-spec) power supply. On July 4th at 07:00 temporary repairs were completed. The Feedwater Pump was restored to service, and full power was achieved, at 01:07 on July 5th. Further minor power reductions followed to adjust control rods. Forgone production was 20.7 effective-full-power-hours.

On July 22nd a slowly increasing trend in unidentified drywell leakage was detected. By the end of the month, leakage had increased from 0.19 to 0.34 gallons per minute, a rate of increase of approximately 0.02 gpm per day. Possible sources of the leakage were being monitored, and preparations and planning begun for a possible shutdown before leakage approaches 1.00 gpm (well below the Technical Specifications requirement of 5.0 gpm).

At 02:18 on July 24th, CV1569, the 'A' Feedwater Pump Minimum Flow Valve, was confirmed to be continuing to drift open, and reactor power was lowered to 85% at 16:32, following a further opening of the valve. (At the 85% power level, it was expected that a low suction pressure trip of the 'A' Feedwater Pump would be avoided were CV1569 to suddenly open fully.) On July 27th at 02:09 power was reduced to 47% to remove the 'A' Feedwater Pump from service to adjust the span ratio for CV1569. This closed the valve and permitted return to full power conditions by 00:08 on July 28th.

Allocation of Production & Losses: July 2001	Electrical Output MWe	Capacity Factor % of 571 MWe (Target Output)	Full Power Equivalent Hours (FPHeq)
Capacity Losses:			
'A' FW Flow Oscillation downpower & repair: 07/02 18:50 - 07/05 01:07	15.75	2.76%	20.52
CV 1569 FW Min Flow Valve 15% down-power: 07/24 16:32 - 07/27 02:09	7.38	1.29%	9.62
CV1569, 'A' Feedpump Min Flow Valve Repair 07/27 02:09 - 07/28 00:08	7.33	1.28%	9.55
Ten Control Rod Adjustments: 07/05, 06, 07, 12, 23, 28, 29	0.60	0.10%	0.78
Maintain Margin to 1658 MWth Limit	0.25	0.04%	0.33
Efficiency Losses:			
Circ Water System Flow Limitation	0.00	0.00%	0.00
Other steam cycle isolation losses	0.00	0.00%	0.00
Unidentified Losses	0.09	0.03%	0.11
Average Weather losses:	10.11	1.77%	13.16
Total On-line Losses:	**41.51**	**7.27%**	**54.07**
Off-Line Losses:	**0.00**	**0.00%**	**0.00**
Electric Generation:			
Plant House Loads (while on-line)	30.78	5.39%	40.13
Net Electric Output	**+498.71**	**+87.34%**	**649.80**
Gross Electric Generation	**529.49**	**92.73%**	**689.93**
Target Electric Output, Total %, Total # of clock-hours	**571.00**	**100.00%**	**744.00**

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
			Main Steam Safety and Relief Valve Challenges this month:	0