

# OPERATING DATA REPORT

DOCKET NO. 050-0331  
 DATE 6-13-80  
 COMPLETED BY J. Van Sickle  
 TELEPHONE 319-851-5611

## OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: May, 1980
3. Licensed Thermal Power (MWt): 1658
- \* 4. Nameplate Rating (Gross MWe): 565 (Turbine Rating)
5. Design Electrical Rating (Net MWe): 538
6. Maximum Dependable Capacity (Gross MWe): 545
7. Maximum Dependable Capacity (Net MWe): 515
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:

Notes

9. Power Level To Which Restricted, If Any (Net MWe): 50% from 5/7/80 to 5/16/80
10. Reasons For Restrictions, If Any: Technical specification restriction for operation with one recirculation system inoperable.

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	3,647	46,727
12. Number Of Hours Reactor Was Critical	590.5	1,848.8	32,412.8
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	555	1,766.3	31,585.5
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	563,184	2,041,176	39,170,736
17. Gross Electrical Energy Generated (MWH)	183,696	696,326	13,120,692
18. Net Electrical Energy Generated (MWH)	170,283	649,673	12,264,736
19. Unit Service Factor	74.6%	48.4%	67.6%
20. Unit Availability Factor	74.6%	48.4%	67.6%
21. Unit Capacity Factor (Using MDC Net)	44.4%	34.6%	51.0%
22. Unit Capacity Factor (Using DER Net)	42.5%	33.1%	48.8%
23. Unit Forced Outage Rate	23.2%	8.7%	20.4%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: \_\_\_\_\_

\* Turbine Rating: 565.7 MWe

Generator Rating: 663.5 (MVA) x .90 (Power Factor) = 597 MWe.

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331

UNIT Duane Arnold Engy.  
Ctr.

DATE 6-13-80

COMPLETED BY J. Van Sickle

TELEPHONE 319-851-5611

MONTH May, 1980

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>40</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>31</u>
8	<u>195</u>
9	<u>217</u>
10	<u>224</u>
11	<u>226</u>
12	<u>224</u>
13	<u>231</u>
14	<u>233</u>
15	<u>234</u>
16	<u>220</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>0</u>
18	<u>195</u>
19	<u>390</u>
20	<u>465</u>
21	<u>462</u>
22	<u>457</u>
23	<u>452</u>
24	<u>220</u>
25	<u>340</u>
26	<u>445</u>
27	<u>478</u>
28	<u>465</u>
29	<u>198</u>
30	<u>59</u>
31	<u>365</u>

## INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

# UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH May, 1980

DOCKET NO. 050-0331

UNIT NAME Duane Arnold Energy Ctr.

DATE 6-13-80

COMPLETED BY J. Van Sickle

TELEPHONE 319-851-5611

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
5.	800501	F	151.3	A	1	80-017	CB	MOTORX	Shutdown due to the failure of the "A" recirculation system M-G set drive motor.
6.	800517	S	21.3	H	1				Shutdown to place "A" recirc. system back in service.
7.	800524	S	0	B	4				Power reduced to perform maintenance on the "A" feedwater pump.
8.	800529	F	16.4	A	1				Power reduced and plant shutdown due to high/low oil level alarm on "B" recirc. pump motor.

<sup>1</sup>  
F: Forced  
S: Scheduled

<sup>2</sup>  
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)

<sup>3</sup>  
Method:  
1-Manual  
2-Manual Scram.  
3-Automatic Scram.  
4-Other (Explain)

<sup>4</sup>  
Exhibit G - Instructions  
for Preparation of Data  
Entry Sheets for Licensee  
Event Report (LER) File (NUREG-  
0161)

<sup>5</sup>  
Exhibit I - Same Source

REFUELING INFORMATION

Docket No. 050-0331  
Unit Duane Arnold Energy Center  
Date June 13, 1980  
Completed by J. Van Sickle  
Telephone 319-851-5611

1. Name of facility.  
A. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown.  
A. Spring, 1981
3. Scheduled date for restart following refueling.  
A. Unknown
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?  
  
A. No
5. Scheduled date(s) for submitting proposed licensing action and supporting information.  
A. 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.  
  
A. No licensing action is anticipated.
7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.  
  
A. a) 368                      B) 364
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies.  
  
A. 2050
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.  
  
A. 1998

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

5-1 At the beginning of the report period the plant was operating at 254 MWe. Preparations for plant shutdown were in progress due to the "A" Reactor Recirculation System M-G Set Drive Motor being out of commission. The generator was taken off the line at 0645 hours. All control rods were inserted by 1454 hours. The reactor was in cold shutdown by 2235 hours.

5-1 The plant was shutdown due to the failure of the "A" Recirculation System M-G Set Drive Motor. The motor failed due to a short within the motor field. The motor was rewound and returned to service.

RO Report 80-017

5-6 Preparations for plant startup were begun. Control rod withdrawals were begun at 2227 hours. The reactor was critical at 2303 hours.

5-7 The main generator was placed on the line at 1403 hours and a power increase was begun. The plant was operating with only one recirculation system in service and power was administratively limited to 50 per cent.

5-11 The plant was operating at 249 MWe.

5-16 A power reduction was begun at 2033 hours in preparation for plant shutdown.

5-17 The generator was taken off the line 0117 hours. Repairs to the "A" Recirculation System M-G Set Drive Motor were completed and preparations for plant startup were begun. The reactor was critical at 1730 hours. The main generator was placed on the line at 2237 hours and a power increase begun.

5-19 During a weekly inspection the oil drain petcock on the governor for standby diesel generator 1G-31 was found open slightly and a small amount of oil had drained from the governor. One half pint of oil was added to restore normal oil level.

RO Report 80-018

5-20 The plant was operating at 500 MWe.

5-22 The HPCI system was taken out of service for maintenance.

5-23 During operability testing following maintenance the HPCI system would not come up to rated speed. The limiting condition for operation, already in effect, was continued and an investigation was begun.

5-24 Power was reduced in order to perform maintenance on the "A" feedwater pump. The plant was at 46 per cent power at 0050 hours. The "A" feedwater pump was placed back in service at 2304 hours and a power increase was begun.

5-27 The plant was operating at 526 MWe.

5-28 The HPCI system was repaired, tested and returned to service. At 2230 hours the "B" Recirculation System Pump Motor high/low oil level alarm came in. The "B" Recirculation System was reduced to minimum speed.

5-28 During alarm testing three 5 AMP fuses which service the A, B and C annunciator cabinets in panel 1C-03 opened.

RO Report 80-019

5-29 The "B" Recirculation System was removed from service at 0059 hours. A power decrease was begun at 1922 hours in preparation for a plant shutdown. The main generator was removed from the line at 2232 hours.

5-29 During surveillance testing the setpoint of instruments controlling the suppression chamber to reactor building vacuum breakers were found to be out of specification.

RO Report Pending

5-30 Oil was added to the "B" Recirculation System Pump Motor at 0350 hours and preparations for plant startup were begun. The reactor was critical at 1058 hours. The main generator was placed on the line at 1459 hours and a power increase was begun.

5-31 During the morning hours problems were experienced with the radwaste building sump pumps which resulted in a small amount of contaminated water being spilled just outside the radwaste building truck bay. The area was surveyed and contaminated material was placed in barrels. The area was again surveyed to insure no contamination remained which was above background levels. At 2236 hours the plant was operating at 438 MWe.

MAJOR SAFETY RELATED MAINTENANCE

Docket No. 050-0331  
Unit Duane Arnold Energy Center  
Date June 13, 1980  
Completed by J. Van Sicken  
Telephone 319-851-5611

DATE	SYSTEM	COMPONENT	DESCRIPTION
5-10-80	Reactor Protection	Relay C71A-K1B	Replaced Relay
5-14-80	Area Radiation Monitoring	ARM-9164	Installed New Detector Tube
5-23-80	Containment Atmospheric Control	LR4384C and LR4385B	Recalibrated Recorders
5-23-80	Containment Atmospheric Control	AR 4382A	Recalibrated Analyzer
5-23-80	Containment Atmospheric Control	AR4381A	Recalibrated Analyzer
5-27-80	Containment Atmospheric Control	AR4381A	Recalibrated Analyzer
5-28-80	Reactor Building Radiation Monitoring	RIM 7606A	Replaced Detector Tube
5-28-80	HPCI	CV-2201	Replaced Hydraulic Actuator Piston Seals
5-29-80	HPCI	HPCI Turbine	Replaced Lube Oil
5-30-80	Containment Atmospheric Control	AR-4382A	Recalibrated Analyzer