

# OPERATING DATA REPORT

DOCKET NO. 050-0331  
 DATE 2-14-79  
 COMPLETED BY L. Van Sickle  
 TELEPHONE 319-851-5611

## OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: January, 1979
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):
10. Reasons For Restrictions, If Any:

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	744	35,064
12. Number Of Hours Reactor Was Critical	7.5	7.5	23,620.3
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	0	0	22,987
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	0	0	28,061,640
17. Gross Electrical Energy Generated (MWH)	0	0	9,337,429
18. Net Electrical Energy Generated (MWH)	0	0	8,716,300
19. Unit Service Factor	0%	0%	65.6%
20. Unit Availability Factor	0%	0%	65.6%
21. Unit Capacity Factor (Using MDC Net)	0%	0%	48.3%
22. Unit Capacity Factor (Using DER Net)	0%	0%	46.2%
23. Unit Forced Outage Rate	100%	100%	22.6%
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: March 1, 1979

\* Turbine Rating: 565.7 MWe

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

7902220101

(9/77)

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331  
 UNIT Duane Arnold Energy Center  
 DATE 2-14-79  
 COMPLETED BY J. Van Sickle  
 TELEPHONE 319-851-5611

MONTH January, 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>
16	<u>0</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>0</u>
18	<u>0</u>
19	<u>0</u>
20	<u>0</u>
21	<u>0</u>
22	<u>0</u>
23	<u>0</u>
24	<u>0</u>
25	<u>0</u>
26	<u>0</u>
27	<u>0</u>
28	<u>0</u>
29	<u>0</u>
30	<u>0</u>
31	<u>0</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 January, 1979

DOCKET NO. 050-0331  
 UNIT NAME Duane Arnold Energy Center  
 DATE 2-14-79  
 COMPLETED BY J. Van Sickel  
 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
1	780617	F	744	A	3	78-030	CB	PIPEXX	Continuation of previous shutdown in which the recirculation system inlet nozzle safe ends were replaced. Startup presently being delayed while a flow restriction is being removed from the N2B riser

<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

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

- 1-1 At the beginning of the report period the reactor was in the cold shutdown condition with the core loaded. The outage which began June 17, 1978 involving the replacement of all eight recirculation system inlet nozzle safe ends continued.
- 1-1 The reactor cavity was drained.
- 1-2 The service platform was installed on the reactor vessel.
- 1-5 The annual inspection of 1G-21 standby diesel generator was completed with the unit being tested satisfactorily.
- 1-6 The annual inspection of 1G-31 standby diesel generator was begun.
- 1-9 The HPCI turbine was rolled with auxiliary boiler steam for testing.
- 1-11 The annual inspection of 1G-31 standby diesel generator was completed with the unit being tested satisfactorily.
- Testing of the HPCI turbine was completed.
- The service platform was removed from the reactor vessel.
- 1-12 The moisture separator was installed in the reactor vessel.
- 1-13 The steam dryer was installed in the reactor vessel and the reactor vessel head was set in place.
- 1-14 The reactor vessel head studs were tensioned.
- 1-15 The reactor vessel head insulation and drywell head were installed.
- 1-17 Control rod friction testing was begun.
- 1-19 Control rod friction testing was completed.
- 1-26 The reactor cavity shield plugs were installed.
- 1-27 The A and B recirculation pumps were started and secured.
- A cold hydrostatic test of the reactor vessel and recirculation system piping was conducted with satisfactory results. Preparations were begun for a hot hydrostatic test.
- 1-28 The mode switch was placed in startup. The reactor was critical at 0520 hours for shutdown margin testing and was immediately driven subcritical again.
- The reactor was critical again at 0612 hours for a second shutdown margin test and was again immediately driven subcritical.
- The reactor was critical at 1540 hours to perform a hot hydrostatic test. Control rods were inserted to take the reactor subcritical at 2310 hours. The number 3 jet pump was found to be inoperable due to no flow indication.

- 1-29 Testing confirmed blockage of an unknown nature existed in the #3 and #4 jet pumps. Preparations were begun to open the reactor vessel to investigate the jet pump blockage problem. The reactor cavity shield plugs were pulled.
- 1-30 The drywell head, insulation head, reactor vessel head, steam dryer and moisture separator were removed.
- 1-31 The service platform was installed on the reactor vessel.

Docket No. 050-0331  
 Unit Duane Arnold Energy  
 Date February 14, 1979  
 Completed by J. Van Sickle  
 Telephone 319-851-5611

MAJOR SAFETY RELATED MAINTENANCE

Date	System	Component	Description
1-4-79	Main Steam Isolation and ADS	LIS 4562	Disassembled, cleaned and reassembled switch
1-5-79	Standby Diesel Generators	1G-21	Rebuilt starting air solenoids
1-5-79	Standby Diesel Generator	1G-21	Completed annual inspection
1-8-79	Reactor Protection	LIS 4536	Disassembled, cleaned and reassembled switch
1-9-79	MSIV Leakage Control	MOV 8402B	Replaced coil in starter
1-9-79	Main Steam Isolation	CV 4421	Adjusted limit switch to set closing time
1-9-79	Radwaste Sumps	MOV 3725	Rebuilt valve
1-11-79	Standby Diesel Generator	1G-31	Rebuilt starting air solenoid
1-11-79	Standby Diesel Generator	1G-31	Completed annual inspection
1-12-79	Reactor Protection	CRD Scram pilot solenoid valves	Rebuilt all solenoid valves
1-12-79	Drywell Radiation Monitors	1C-218B	Replaced sample pump
1-13-79	Drywell Radiation Monitors	1C-218A	Replaced sample pump
1-13-79	RHR	Hanger HBC-16-H-129	Pipe hanger restored to design condition
1-13-79	RHR	Hangers HBB-24-H-4, HBB-23-H-5, GBB-5-H-19 and GBB-3-H-20C	Tightened pipe clamp bolts
1-13-79	RHR	Snubber GBB-3-SS-235	Aligned and tightened pipe clamp

MAJOR SAFETY RELATED MAINTENANCE

Docket No. 050-0331  
 Unit Duane Arnold Energy Center  
 Date February 14, 1979  
 Completed by J. Van Sickle  
 Telephone 319-851-5611

DATE	SYSTEM	COMPONENT	DESCRIPTION
1-16-79	RHR Cooling Water	1P-22D	Rebuilt pump
1-17-79	Neutron Monitoring	TIP Shear Valves	Replaced explosive charges
1-19-79	Main Steam Isolation and ADS	PSV 4405	Replaced valve body
1-19-79	Main Steam Isolation and ADS	PSV 4405	Adjusted pilot setpoint
1-19-79	Main Steam Isolation and ADS	PSV 4407	Adjusted pilot setpoint
1-22-79	Reactor Non-Nuclear Instruments	LITS 4565	Disassembled, cleaned and reassembled
1-24-79	Primary Containment H & V	MOV 5714A	Replaced motor
1-24-79	Primary Containment H & V	MOV 5727B	Set limit switches
1-25-79	Core Spray	CV-2138	Replaced solenoid actuator
1-27-79	River Water Supply	1P-117D	Rebuilt pump
1-27-79	Reactor Protection	1K-15A, B, D, H	Repaired loose auxiliary contacts
1-27-79	Standby Liquid Control	SBLC explosive valves	Replaced explosive valves
1-27-79	480 Volt Motor Control Centers	Drywell electrical penetration splices	Replaced cable splices
1-27-79	River Water Supply	1P-117C	Reset impeller clearance
1-27-79	Core Spray	PS-2116	Replaced switch and alarm card
1-28-79	Neutron Monitoring	IRM "C"	Cleared short from cable
1-29-79	Neutron Monitoring	IRM "E"	IRM Replaced

REFUELING INFORMATION

Docket No. 050-0331  
Unit Duane Arnold Energy Center  
Date February 14, 1979

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. Unknown. Under review due to present extended outage.
3. Scheduled date for restart following refueling.  
A. Unknown. Under review due to the present extended outage.
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?  
A. MCPRR and MAPLHGR operating limits as derived from transient and accident analyses.
5. Scheduled date(s) for submitting proposed licensing action and supporting information.  
A. Unknown.
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. The reload will consist of up to 100 8 x 8 2 water rod bundles.
7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.  
A. a) 368      b) 276
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