

OPERATING DATA REPORT

DOCKET NO. 050-0331
 DATE 12-15-80
 COMPLETED BY J. Van Sickle
 TELEPHONE 319-851-5611

OPERATING STATUS

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	720	8040	51,120
12. Number Of Hours Reactor Was Critical	512.9	5877.4	36,441.4
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	482.4	5734	35,553.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	660,358	7,760,578	44,890,138
17. Gross Electrical Energy Generated (MWH)	224,109	2,600,080	15,024,446
18. Net Electrical Energy Generated (MWH)	210,988	2,439,713	14,054,777
19. Unit Service Factor	67.0%	71.3%	69.5%
20. Unit Availability Factor	67.0%	71.3%	69.5%
21. Unit Capacity Factor (Using MDC Net)	59.6%	58.9%	53.4%
22. Unit Capacity Factor (Using DER Net)	54.5%	56.4%	51.1%
23. Unit Forced Outage Rate	33.0%	9.4%	19.3%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			
Refueling, March 7, 1980, 9 weeks			

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 Energy Center

DATE December 15, 1980

COMPLETED BY J. Van Sickle

TELEPHONE 319-851-5611

MONTH November, 1980

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>518</u>
2	<u>514</u>
3	<u>493</u>
4	<u>508</u>
5	<u>477</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>109</u>
16	<u>354</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>319</u>
18	<u>406</u>
19	<u>443</u>
20	<u>486</u>
21	<u>502</u>
22	<u>493</u>
23	<u>484</u>
24	<u>502</u>
25	<u>496</u>
26	<u>469</u>
27	<u>113</u>
28	<u>229</u>
29	<u>434</u>
30	<u>417</u>
31	<u></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

DOCKET NO. 050-0331
 UNIT NAME Duane Arnold Energy Center
 DATE December 15, 1980
 COMPLETED BY J. Van Sickel
 TELEPHONE 319-851-5611

REPORT MONTH November

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
20.	801106	F	220.8	A	1	80-054 80-055	CB SF SD	PUMPXX VALVEX ZZZZZZ	Plant was shutdown to replace the seal on the "A" recirculation pump. During startup on 11/10/80 main steam relief valve PSV 4405 was opened and stuck open resulting in a reactor shutdown. Plant remained shutdown pending repairs to PSV-4405 and correction of a wiring error.
21.	801127	F	8.6	A	4		HA	PIPEXX	Power was reduced and the generator taken off line to repair an EHC oil leak.
22.	801127	F	8.2	G	3				Reactor scram when operator set in wrong APRM gain adjustment.

1 F: Forced
S: Scheduled

2 Reason:
A-Equipment Failure (Explain)
B-Maintenance of 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-Other (Explain)

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

5 Exhibit I - Same Source

REFUELING INFORMATION

Docket No. 050-0331
Unit Duane Arnold Energy Cen
Date December 15, 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. March 7, 1981
3. Scheduled date for restart following refueling.
A. May 3, 1981
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

11-1 At the beginning of the report period the plant was operating at 548 MWe.

11-5 A load reduction was begun in preparation for a plant outage to replace the seal on the "A" recirculation pump.

11-6 It was determined that the monthly functional test of the turbine control valve fast closure for reactor protection system trip and recirc pump trip initiation logic had not been completed for October.

RO Report 80-053

11-6 The generator was tripped at 0255 hours. The reactor was subcritical by 0600 hours. Work was in progress to replace the seal assembly on the "A" recirculation pump.

11-9 Replacement of the "A" recirc. pump seal was completed and preparation for plant startup was begun.

11-10 The reactor was critical at 0956 hours.

In an attempt to clear leakage, main steam relief valve PSV 4405 was cycled open. The valve stuck open and the reactor scrammed due to low steam line pressure.

RO Report 80-054

Following a reactor scram and water level transient, it was found that the channel "A" side of the containment Group 3 isolation had not tripped as it should have. The cause was determined to be a wiring error in the isolation logic.

RO Report 80-055

The plant remained shutdown pending repairs to PSV 4405, correction of the wiring error, and completion of a review of all safety related electrical design changes made during the 1980 refueling outage.

11-11 The reactor was in cold shutdown at 0230 hours.

11-14 During normal surveillance testing drywell high pressure (containment spray permissive) PS-4312C tripped at 2.35 PSIG. The required setpoint is less than 2.0 PSIG.

RO Report 80-056

11-14 During surveillance testing PR-4384A was found failed downscale. The cause was determined to be a defective amplifier board.

RO Report 80-057

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

- 11-14 Preparations for reactor startup were begun. The reactor was critical at 2244 hours.
- 11-15 The generator was placed on the line at 0744 hours and a power increase begun.
- 11-16 The plant was operating at 411 MWe at 1430 hours. A load reduction was begun at 1942 hours in preparation for control rod withdrawals. Rod withdrawals were completed at 2136 hours and a power increase begun.
- 11-18 Control rod withdrawals were completed at 1400 hours. A fuel preconditioning ramp was begun at 1600 hours.
- 11-19 During surveillance testing instrument AC and battery bus undervoltage relay 27-411 was found to have a setpoint of 207 volts. The required setpoint is 220 ± 11 volts.

RO Report Pending

- 11-19 Control rod withdrawals were completed at 0510 hours and the fuel preconditioning ramp resumed.
- 11-20 The plant was operating at 537 MWe at 2230 hours.
- 11-25 A power reduction was begun in preparation for control rod withdrawals.
- 11-26 Rod withdrawals were completed at 0027 hours and a fuel preconditioning ramp begun.

An EHC oil leak was found and a load reduction begun at 2154 hours in preparation for taking the unit off the line.
- 11-27 The generator was taken off the line at 0233 hours. The EHC leak was repaired, and the generator placed back on the line at 1112 hours and a load increase begun. A reactor scram occurred at 2147 hours when an operator set in a wrong APRM GAF.
- 11-28 The reactor was critical at 0228 hours. The generator was placed on the line at 0557 hours and a load increase begun.
- 11-28 During plant startup following a reactor scram it was found that required surveillance testing of the scram discharge volume high level instrumentation had not been completed.

RO Report Pending

- 11-29 Control rod withdrawals were begun at 2352 hours.
- 11-30 Rod withdrawals were completed at 0026 hours and a load increase begun. The plant was operating at 487 MWe at 2235 hours.

MAJOR SAFETY RELATED MAINTENANCE

Docket No. 050-0331
 Unit Duane Arnold Energy Center
 Date December 15, 1980
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DATE	SYSTEM	COMPONENT	DESCRIPTION
11-4-80	Containment Atmospheric Control	RE 8102A	Replaced detector tube
11-7-80	CRD Hydraulic	HCU 22-15	Replaced cartridge valve
11-9-80	CRD Hydraulic	HCU 10-11	Replaced cartridge valve
11-10-80	Reactor Vessel Recirculation	1P-201A	Replaced seal assembly
11-14-80	Primary Containment	Group III Isolation Logic	Corrected wiring error
11-15-80	Main Steam Isolations and ADS	PSV-4405	Replaced pilot assembly
11-17-80	Containment Atmospheric Control	PR-4384A	Replaced amplifier board
11-18-80	Control Building H&V	RM-6101A, RM-6101B	Replaced photo multiplier tubes
11-18-80	Containment Atmospheric Control	AN-8181A	Installed new chemicals
11-19-80	125 Volt DC	1D 2314	Repaired ground in system
11-20-80	Reactor Building Rad Monitoring	RM 7606A	Replaced detector tube