

OPERATING DATA REPORT

DOCKET NO. 050-0331
 DATE 08-15-85
 COMPLETED BY Bradford Thomas
 TELEPHONE 319-851-7339

OPERATING STATUS

1. Unit Name Duane Arnold Energy Center
2. Reporting Period July, 1985
3. Licensed Thermal Power (MWt): 1658
4. Nameplate Rating (Gross MWe): 565 (Turbine)
5. Design Electrical Rating (Net MWe): 538
6. Maximum Dependable Capacity (Gross MWe): 545
7. Maximum Dependable Capacity (Net MWe): 515

Notes

8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since the Last Report, Give Reasons:

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	<u>744.0</u>	<u>5087.0</u>	<u>92015.0</u>
12. Number of Hours Reactor Was Critical	<u>286.4</u>	<u>1060.2</u>	<u>63648.9</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>150.3</u>
14. Hours Generator On-Line	<u>265.7</u>	<u>1038.8</u>	<u>61886.5</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>218976</u>	<u>1224444</u>	<u>77684379</u>
17. Gross Electrical Energy Generated (MWH)	<u>68273</u>	<u>404123</u>	<u>25991477</u>
18. Net Electrical Energy Generated (MWH)	<u>62682</u>	<u>376335</u>	<u>24332486</u>
19. Unit Service Factor	<u>35.7</u>	<u>20.4</u>	<u>67.3</u>
20. Unit Availability Factor	<u>35.7</u>	<u>20.4</u>	<u>67.3</u>
21. Unit Capacity Factor (Using MDC Net)	<u>16.4</u>	<u>14.4</u>	<u>51.3</u>
22. Unit Capacity Factor (Using DER Net)	<u>15.7</u>	<u>13.8</u>	<u>49.2</u>
23. Unit Forced Outage Rate	<u>0</u>	<u>0</u>	<u>16.7</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

None

25. If Shut Down At End Of Report Period, Estimated Date of Startup: N/A

8508210239 850731
 PDR ADOCK 05000331
 R PDR

IE24 1/1
 (9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331

UNIT Duane Arnold Energy Center

DATE 08-15-85

COMPLETED BY Bradford Thomas

TELEPHONE 319-851-7339

MONTH July, 1985

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

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	0
18	0
19	0
20	2
21	72
22	72
23	122
24	169
25	167
26	173
27	200
28	357
29	463
30	452
31	351

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.

(9/77)

MAJOR/SAFETY RELATED MAINTENANCE

Docket No. 050-0331

Unit Name Duane Arnold Energy Center

Date 08-15-85

Completed by Bradford Thomas

Telephone 319-851-7339

DATE	SYSTEM	COMPONENT	DESCRIPTION
7/02/85	Reactor Water Cleanup	Leak Detection Logic	Installed time delay to prevent system Isolation caused by spurious signals.
7/07/85	Reactor Protection (RPS)	RPS Feeder Breaker	Repaired a faulty damping spring on a newly Installed trip coil
7/09/85	Reactor Protection	RPS Motor-Generator Set	Replaced Local Power Range Monitor operational amplifiers
7/20/85	Reactor Core Isolation Cooling (RCIC)	RCIC Main Turbine	Calibration of turbine governor components
7/21/85	High Pressure Coolant Injection (HPCI) Deluge System	HPCI Deluge Test Valve	Repaired leaking test valve
7/22/85	Turbine Generator	Main Turbine	Repaired backup overspeed circuitry.
7/30/85	Reactor Protection	Rod Block Monitor (RBM)	Repaired "A" channel on RBM

UNIT SHUTDOWNS AND POWER REDUCTIONS

Docket No. 050-0331

Unit Name Duane Arnold Energy Center

Date 08-15-85

REPORT MONTH July, 1985

Completed by Bradford Thomas

Telephone 319-851-7339

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of ³ Shutdown or Power Reduction	Licensee Event Report #	System ⁴ Code	Component ⁵ Code	Cause
1	02/02/85	S	471.5	C	1	-	-	-	Continued Refuel Outage
2	07/21/85	S	0.9	B	1	-	-	-	Overspeed turbine trip testing
3	07/22/85	S	5.9	B	1	-	-	-	Turbine tripped to repair backup overspeed circuitry
4	07/30/85	F	0	A	1	-	-	-	Power reduction due to limiting control rod pattern with an inoperable Rod Block Monitor channel

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-Other(Explain)

4

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

5

Exhibit 1-Same Source

Docket No. 050-0331
Unit Name Duane Arnold Energy Center
Date 08-15-85
Completed by Bradford Thomas
Telephone 319-851-7339

REFUELING INFORMATION

1. Name of facility.
A. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown.
A. 1987
3. Scheduled date for restart following refueling.
A. 1987
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?
A. None currently identified
5. Scheduled date(s) for submitting proposed licensing action and supporting information.
A. None currently identified
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.
No.
7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.
A. a) 368 b) 696
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

Docket No. 050-0331
Unit Name Duane Arnold Energy Center
Date 08-15-85
Completed by Bradford Thomas
Telephone 319-851-7339

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

- 07/01/85 At the beginning of the month the Duane Arnold Energy Center was in the final stages of a refuel and maintenance outage.
- 07/02/85 At 2156 hours, the Reactor Water Cleanup (RWCU) system isolated as a result of a momentary spurious signal in the leak detection instrumentation.
(LER 85-023)
- 07/04/85 At 0852 hours, pressurization of the primary containment began in preparation for the Integrated Leak Rate Test.
- 07/07/85 At 1142 hours, a full Reactor Protection System trip occurred during loading of the "B" RPS motor-generator set feeder breaker. At the time the cause was suspected to be a low sustained current trip setting. After adjusting the trip setting at 2229 hours, a full RPS trip again occurred during feeder breaker loading. The cause of both trips was attributed to the breaker having an unattached trip coil inside damping spring.
(LER 85-024)
- 07/08/85 At 1610 hours, a full RPS trip signal occurred during a routine surveillance test. A procedural deficiency had called out an incorrect jumper placement.
(LER 85-025)
- 07/09/85 At 0850 hours, the "A" RPS logic tripped during reenergization of the "B" RPS motor-generator set. The cause of the trip signal was an upscale signal from a Local Power Range Monitor operational amplifier.
(LER 85-034)
- 07/13/85 At 1847 hours a RWCU isolation signal was received due to removing a temporary surveillance test jumper prior to resetting the isolation logic.
(LER 85-023)
- 07/15/85 At 1732 hours, recirculation flow was increased to increase moderator temperature in anticipation of Reactor Startup.
- At 1951 hours a RWCU isolation occurred during testing of other systems due to a procedural deficiency which omitted the placement of a jumper to prevent RWCU isolation.
(LER 85-023)
- 07/18/85 At 1222 hours, the Mode Switch was placed in the startup position and reactor startup was commenced for shutdown margin testing. The reactor was critical at 1538 hours.
- 07/19/85 At 1933 hours, the reactor reached 400 psig in preparation for primary containment walkdown. The reactor was driven subcritical at 2110 hours. At 2200 hours primary containment inspection found several small packing leaks. All leaks were repaired and personnel removed from the Drywell on 7/20/85 by 0005 hours.

Docket No. 050-0331
Unit Name Duane Arnold Energy Center
Date 08-15-85
Completed by Bradford Thomas
Telephone 319-851-7339

NARRATIVE SUMMARY OF OPERATING EXPERIENCE (Continued)

07/20/85 The reactor was returned to critical at 0135 hours. At 0745 hours, rolling of the main turbine for warm-up in preparation for turbine-generator startup commenced. The mode switch was placed in the run position at 1308. The main generator was synchronized to the grid at 1532 hours.

At 2230 hours, the Reactor Core Isolation Cooling System tripped on fast auto-start during quarterly surveillance testing, commencing a 7-day LCO. Repairs were complete on 7/24/85 ending the LCO.

(LER 85-028
pending)

At 2358 hours the "C" RHR service water pump became inoperable when its auto-vent valve stuck open. A 30-day LCO was entered. The LCO was cancelled when repairs were completed on 7/23/85.

07/21/85 At 0219 hours control rods were inserted to reduce power in preparation for turbine overspeed trip testing. The turbine was tripped at 0247 hours.

At 0308 hours the overspeed turbine trip test was completed. The backup overspeed circuitry failed. The generator was resynchronized to the grid at 0339 hours.

At 1130 hours the HPCI Deluge system was declared inoperable when a valve leak was detected. A 14-day LCO was entered. Repairs were completed on 7/30/85 and the LCO cancelled.

(LER 85-027
pending)

07/22/85 At 1803 hours power was reduced to remove the turbine from service for repairs to the backup overspeed circuitry. The main turbine was tripped at 1955 hours.

07/23/85 Main turbine repairs were completed at 0148 hours, and the main generator placed back on-line.

07/30/85 At 1720 hours a 24-hour LCO was entered due to one inoperable channel on the Rod Block Monitor (RBM) system while being in a limiting control rod pattern. The 24-hour LCO was cancelled at 1603 hours on 7/31/85 when the channel was declared to be operable.

7/31/85 At 1320 hours a momentary violation of secondary containment occurred when two airlock doors were simultaneously opened.

(LER 85-030
pending)

At the end of the month the plant was in normal operation at 376 MWe (gross).

Iowa Electric Light and Power Company

August 15, 1985
DAEC-85-730

Director, Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

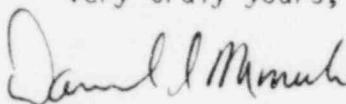
Attn: Document Control Desk

Subject: Duane Arnold Energy Center
Docket No. 50-331
Op. License DPR-49
July, 1985 Monthly Operating Report

Dear Sirs:

Please find enclosed 12 copies of the Duane Arnold Energy Center Monthly Operating Report for July, 1985. The report has been prepared in accordance with the guidelines of Regulatory Guide 1.16 and distribution has been made in accordance with DAEC Technical Specifications, Appendix A, Section 6.11.1.c and Regulatory Guide 10.1.

Very truly yours,



Daniel L. Mineck
Plant Superintendent - Nuclear
Duane Arnold Energy Center

DLM/BNT/kp*
Enclosures
File A-118d, TE-5

cc: Director, Office of Inspection
and Enforcement
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137 (1)

Director, Office of Management and
Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555 (1)

U. S. Nuclear Regulatory Commission
ATTN: Mr. M. Thadani
Phillips Building
Washington, D. C. 20555

INPO Records Center
1100 Circle 75 Parkway
Suite 1500
Atlanta, GA 30339

Mr. Phillip Ross
U. S. Nuclear Regulatory Commission
Maryland National Bank Building
Washington, D. C. 20555

NRC Resident Inspector

Mr. Dennis Murdock
Central Iowa Power Cooperative
Box 2517
Marion, IA 52302

Mr. Russ Gamble
Corn Belt Power Cooperative
1300 13th Street North
Humboldt, IA 50548