

# OPERATING DATA REPORT

DOCKET NO. 050-0331  
DATE 09-15-90  
COMPLETED BY Hai Tran  
TELEPHONE (319) 851-7491

## OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: August 1990
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): 565
7. Maximum Dependable Capacity (Net MWe): 538
8. If Changes Occur in Capacity Ratings (Items Number 3 through 7) Since the Last Report, Give Reasons: N/A

9. Power Level to Which Restricted, If Any (Net MWe): N/A
10. Reasons for Restrictions, If Any: N/A

	This Month	Yr-to-Date	Cumulative
11. Hours in Reporting Period	<u>744.0</u>	<u>5831.0</u>	<u>136583.0</u>
12. Number of Hours Reactor Was Critical	<u>.0</u>	<u>4206.3</u>	<u>98075.9</u>
13. Reactor Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>192.8</u>
14. Hours Generator On-Line	<u>.0</u>	<u>4185.9</u>	<u>95393.9</u>
15. Unit Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>.0</u>	<u>6312158.4</u>	<u>126392993.2</u>
17. Gross Electrical Energy Generated (MWH)	<u>.0</u>	<u>2105327.0</u>	<u>42440847.0</u>
18. Net Electrical Energy Generated (MWH)	<u>-2285.1</u>	<u>1974137.5</u>	<u>39780267.1</u>
19. Unit Service Factor	<u>.0</u>	<u>71.8</u>	<u>69.8</u>
20. Unit Availability Factor	<u>.0</u>	<u>71.8</u>	<u>70.0</u>
21. Unit Capacity Factor (Using MDC Net)	<u>.0</u>	<u>62.9</u>	<u>56.3</u>
22. Unit Capacity Factor (Using DER Net)	<u>.0</u>	<u>62.9</u>	<u>54.1</u>
23. Unit Forced Outage Rate	<u>N/A</u>	<u>2.1</u>	<u>13.9</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each: <u>Cycle 10/11 refuel outage, June 28, 1990 - 70 days</u>			
25. If Shutdown at End of Report Period, Est. Date of Startup: <u>September 7, 1990</u>			

(9/77)

9009200029 900915  
PDR ADOCK 05000331  
R PDC

# AVERAGE DAILY UNIT POWER LEVEL

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MONTH August 1990

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

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

16	.0
17	.0
18	.0
19	.0
20	.0
21	.0
22	.0
23	.0
24	.0
25	.0
26	.0
27	.0
28	.0
29	.0
30	.0
31	.0

# REFUELING INFORMATION

DOCKET NO. 50-0331  
DATE 09-15-90  
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1. Name of facility.
  - a. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown.
  - a. Unit was shutdown on June 28, 1990 for refueling.
3. Scheduled date for restart following refueling.
  - a. September 7, 1990
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?

Technical Specification changes such as changing Minimum Critical Power Ratio (MCPR) safety limit from 1.04 to 1.07 and removal of Cycle Dependent Limits from Technical Specifications have received NRC approval.

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.

104 GE-10 fuel assemblies were loaded in the reactor core for the upcoming cycle.

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.
  - a. 368
  - b. 1048
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 - Licensed Capacity or
  - b. 1898 under the presently installed storage rack capacity.
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.
  - a. 2000 - Licensed Capacity or
  - b. 1997 under the presently installed storage rack capacity.

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: August 1990

Docket No.: 050-0331

Unit: Duane Arnold Energy Center

Date: 09-15-90

Completed By: Hai Tran

Telephone: (319) 851-7491

No.	Date	Type(1)	Duration (Hours)	Reason(2)	Method of Shutting (3) Down Reactor	Licensee Event Report #	System Code (4)	Comp. Code (5)	Cause
1	06-28-90	S	744.0	C	1	N/A	N/A	N/A	The plant was in cold shutdown for the cycle 10/11 refuel outage since June 28, 1990, and scheduled to startup on September 7, 1990.

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)

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

5 - Exhibit 1-  
Same Source

MAJOR/SAFETY RELATED MAINTENANCE

Docket No.: 050-0331  
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DATE	SYSTEM	COMPONENT	DESCRIPTION
08-20-90	Standby Diesel Generator System (SDGS)	Diesel Engines	Maintenance and inspection on two diesel engines were completed.
08-23-90	Control Rod Drive (CRD) System.	CRD Hydraulic Lines	CRD line repair project was completed and root cause identification on leaking lines were continuing.
08-31-90	Local Power Range Monitor (LPRM)	Detector	"Current/Voltage" tests were completed and the detector was returned to service.
08-31-90	Reactor Water Cleanup System (RWCS), and Extraction Steam (ES) System.	Pipes.	Replacement of the old piping was in progress.
08-31-90	Reactor Recirculation System. (RRS).	Recirculating Pumps.	Recirculating pump upgrade project was underway. Inspection of the case internals, wear rings, case flanges and suction splitter attachment welds were performed.
08-31-90	Main Steam Line (MSL) System.	Main Steam Isolation Valves (MSIV)	Various maintenance, testing, and modifications were still in progress to all MSIVs.
08-31-90	'B' Cooling Tower	Cooling Tower Structures.	Installation of fill and structural repairs were underway.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

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- 08-01-90 At the beginning of the month the plant was in cold shutdown for the cycle 10/11 refueling outage. There were three 10 CFR 50.73 reportable events during the month.
- 08-21-90 A partial Group III (control room habitability) Isolation was received due to an inadvertent personnel error during on-going Design Change Package work in the control room backpanel area. Other valve position changes which have occurred due to outage-related work are being reviewed for reportability.
- LER 90-011 (pending)
- 08-23-90 An operator and an instrumentation and control (I&C) technician were valving in the level transmitter for flood-up level indication. While opening the isolation valve per procedure, the valve "popped" off its seat and opened. This caused a perturbation on the common reference leg which was sensed by the Reactor Protection System (RPS) level transmitters and caused the RPS to trip.
- 08-26-90 On August 26, 1990, while replacing cable protectors under the vessel, an I&C helper accidentally pulled a shared Local Power Range Monitor (LPRM) cable loose when attempting to catch a falling piece. The shared LPRM was sensed by both sides of the logic and caused a full RPS trip. The two separate events will be addressed in a single report.
- LER 90-012 (pending)
- 08-31-90 At the end of the month the plant was in cold shutdown for the cycle 10/11 refueling outage.