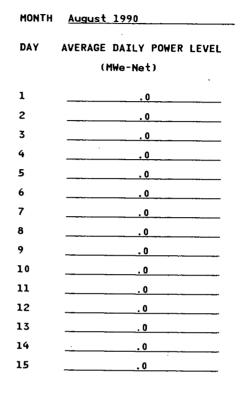
## OPERATING DATA REPORT

		COMPLETED BY H	<u>050-0331</u> 9-15-90 ai Tran 319) 851-7491	
OPERATING STATUS		Notes		
1. Unit Name: Duane Arnold Energy Center				
2. Reporting Period: <u>August 1990</u>				
3. Licensed Thermal Power (MWt): <u>1658</u>				
4. Nameplate Rating (Gross MWe): <u>565 (Turbi</u>	ine)			
5. Design Electrical Rating (Net MWe): 538				
6. Maximum Dependable Capacity (Gross MWe):	565			
7. Maximum Dependable Capacity (Net MWe): 5	538			
<ul> <li>the Last Report, Give Reasons: <u>N/A</u></li> <li>9. Power Level to Which Restricted, If Any (</li> </ul>	<u> </u>	·····		
10. Reasons for Restrictions, If Any: <u>N/A</u>	This Month	Yr-to-Date	Cumulative	<u>-</u> -
11. Hours in Reporting Period	744.0	5831.0	136583.0	
12. Number of Hours Reactor Was Critical	.0	4206.3	98075.9	
13. Reactor Reserve Shutdown Hours	.0		192.8	
14. Hours Generator On-Line	0_	4185.9	95393.9	
15. Unit Reserve Shutdown Hours	.0		.0	
16. Gross Thermal Energy Generated (MWH)	.0	6312158.4	126392993.2	
17. Gross Electrical Energy Generated (MWH)	.0	<u>2105327.0</u>	42440847.0	
18. Net Electrical Energy Generated (MWH)		1974137.5	39780267.1	
19. Unit Service Factor		71.8	69.8	
20. Unit Availability Factor	.0	71.8_	70.0	
21. Unit Capacity Factor (Using MDC Net)	0	62.9	56.3	
22. Unit Capacity Factor (Using DER Net)	0_	62.9	54,1	
23. Unit Forced Outage Rate	<u> </u>	2.1	13.9	
24. Shutdowns Scheduled Over Next 6 Months (1 of each: <u>Cycle 10/11 refuel outage, June</u>	<u>a 28, 1990 - 7</u> 0	) days		
25. If Shutdown at End of Report Period, Est.	. Date of Star	tup: <u>September</u>	7, 1990	

9009200029 900915 PDR ADOCK 05000331 R PDC (9/77)

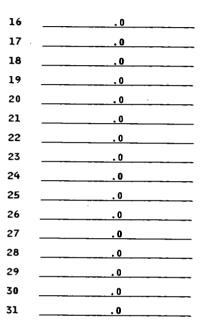
### AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	
	09-15-90
COMPLETED BY	
TELEPHONE	(319) 851-7491



### DAY AVERAGE DAILY POWER LEVEL





### REFUELING INFORMATION

DOCKET NO.	50-0331
DATE	09-15-90
COMPLETED BY	Hai Tran
TELEPHONE	(319) 851-7491

#### 1. Name of facility.

а. Duane Arnold Energy Center

- 2. Scheduled date for next refueling shutdown.
  - Unit was shutdown on June 28, 1990 for refueling. а.
- 3. Scheduled date for restart following refueling.
  - a. September 7, 1990
- Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? 4.

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.

Scheduled date(s) for submitting proposed licensing action and supporting information. 5.

N/A

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 6. 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.

а. 368 ь. 1048

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. 8.

2050 - Licensed Capacity or 1898 under the presently installed storage rack capacity. a. ь.

The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity. 9.

а.

2000 - Licensed Capacity or 1997 under the presently installed storage rack capacity. Ь.

# UNIT SHUTDOWNS AND POWER REDUCTIONS

Docket No.: 050-0331 Unit: Duane Arnold Energy Center Date: 09-15-90 Completed By: Hai Tran Telephone: (319) 851-7491

## REPORT MONTH: August 1990

Date	Type(1)	Duration (Hours)	Reason(2)	Method of Shutting (3) Down Reactor	Licensee Event Report #	System Code (4)	Comp. Code (5)	Cause
06-28-90	S	744.0	С	1	N/A	NZA	NZA	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.
				· · · ·				
					•			
Forced Scheduled	A B C D E F G	-Equipment -Maintenanc -Refueling -Regulatory -Operator T -Administra -Operationa	ce or Test / Restrictio /raining & L ative al Error (Fx	n icense Examinat		l-Manual 2-Manual 3-Automat 4-Continu 5-Reduced	ic Scra ed Load	Licensee Event Report
	06-28-90 Forced	06-28-90 S Forced 2 - R Scheduled 2 - R B G	Date       Type(1)       (Hours)         06-28-90       S       744.0         Forced       2       Reason:         Scheduled       2 - Reason:         A-Equipment       B-Maintenano         C-Refueling       D-Regulatory         E-Operator N       F-Administra         G-Operational       F-Administra	Date       Type(1)       (Hours)       Reason(2)         06-28-90       S       744.0       C         Image: Second structure       S       S       S         Image: Second structure       S	Date     Type(1)     Juration (Hours)     Reason(2)     Shutting (3) Down Reactor       06-28-90     S     744.0     C     1       Image: Straight of the	Date     Type(1)     Duration (Hours)     Reason(2)     Shutting (3) Down Reactor     Event Report #       06-28-90     S     744.0     C     1     N/A       Image: State of the s	Date       Type(1)       Duration (Hours)       Reason(2)       Shutting (3) Down Reactor       Event # Report #       Code (4)         06-28-90       S       744.0       C       1       N/A       N/A         Image: Second	Date     Type(1)     Duration (Hours)     Reason(2)     Shutting (3) Down Reactor     Event Report #     Code (4)     Code (5)       06-28-90     S     744.0     C     1     N/A     N/A     N/A       06-28-90     S     744.0     C     1     N/A     N/A     N/A       06-28-90     S     744.0     C     1     N/A     N/A     N/A       06-28-90     S     744.0     C     1     N/A     N/A       06-28-90     S     744.0     C     1     N/A       06-28-90     S     744.0     C     1       06-28-90     S     744.0     C     1     N/A       06-28-90     S     744.0     C     1       06-28-90     S     744.0     S     1       06-28-90     S     744.0     S     1       100     S     1     1     1     1       100     S     1     1     1     1       100     S     1     1     1

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# MAJOR/SAFETY RELATED MAINTENANCE

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Docket No.: 050-0331 Unit: Duane Arnold Energy Center Date: 09-15-90 Completed By: Hai Tran Telephone: (319) 851-7491

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.
	Local Power Range Monitor (LPRM)	Detector	"Current/Voltage" tests were completed and the detector was returned to service.
1	Reactor Water Cleanup System (RWCS), and Extraction Steam (ES) System.	Pipes.	Replacement of the old piping was in progress.
	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)	
08-31-90	'B' Cooling Tower	Cooling Tower Structures.	Installation of fill and structural repairs were underway.
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## NARRATIVE SUMMARY OF OPERATING EXPERIENCE

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

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.