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TRAN,H.	Iowa Electric Light & Power Co.		
HANNEN, R.L.	Iowa Electric Light & Power Co.		
RECIP.NAME	RECIPIENT AFFILIATION		

SUBJECT: Monthly operating rept for Feb 1990 for Duane Arnold Energy Ctr.W/900315 ltr.

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Iowa Electric Light and Power Company

March 15, 1990 DAEC-90-0230

Mr. A. Bert Davis Regional Administrator Region III U. S. Nuclear Regulatory Commission 799 Roosevelt Road Glen Ellyn, IL 60137

> Subject: Duane Arnold Energy Center Docket No: 50-331 Op. License DPR-49 February 1990 Monthly Operating Report

Dear Sirs:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for February, 1990. 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, Section 6.11.1.c.

trutv Wours. Junea 3-15-90

Rick L. Hannen Plant Superintendent - Nuclear

RLH/gt+ Enclosures File A-118d

cc: Dir. of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Mail Station P1-137 Washington, D. C. 20555

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NRC Resident Inspector

Mr. Dennis Murdock Central Iowa Power Cooperative Box 2517 Cedar Rapids, IA 52406

Mr. Dale Aherns Corn Belt Power Cooperative 1300 13th Street North Humboldt, IA 50548

Dr. William R. Jacobs, Jr. GDS Associates, Inc. Suite 720 1850 Parkway Place Marietta, Georgia 30068-8237

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y Center • 3277 DAEC Road • Palo, Iowa 52324 • 319/851-7611

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	050-0331
DATE	3-15-90
COMPLETED BY	Hai Tran
TELEPHONE	(319) 851-7491

MONTH	February 1990
DAY	AVERAGE DAILY POWER LEVEL
	(MWe-Net)
1	531
2	533
3	532
4	523
5	528
6	531
7	530
8	527
9	529
10	530
11	520
12	527
13	531
14	533

530

15

DAY AVERAGE DAILY POWER LEVEL

(MWe-Net)

16	535
17	529
18	515
19	544
20	532
21	523
22	525
23	521
24	525
25	478
26	537
27	501
28	274
29	N/A
30	N/A
31	N/A

OPERATING DATA REPORT

		DOCKET NO. 0	50-0331 15-90	_			
		OMPLETED BY Ha	i Tran 19) 851-7491	-			
			<u> </u>	-			
OPERATING STATUS		Notes					
l. Unit Name: Duane Arnold Energy Center							
2. Reporting Period: February 1990							
3 Licensed Thermal Power (MWt): 1658				ł			
4 Namenlate 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): 53	 38						
	- Number 7 thr]			
8. If Changes Occur in Capacity Ratings (Item	S NUMBER 5 CH	ough /) Since					
the Last Report, Give Reasons: <u>N/A</u>							
O Rever Level to Which Restricted Té Apy (b	int MWa): N/A	· · · · · · · · · · · · · · · · · · ·					
10 Peasons for Pestnictions. If Any: N/A							
			· · · · · · · · · · · · · · · · · · ·				
	This Month	Yr-to-Date	Cumulative				
11. Hours in Reporting Period	672.0	1416.0	132168.0	•			
12. Number of Hours Reactor Was Critical	672.0	1416.0	95285.6				
13. Reactor Reserve Shutdown Hours	0	0	192.8				
14. Hours Generator On-Line	672.0	1416.0	92624.0				
15. Unit Reserve Shutdown Hours	0	0	0				
16. Gross Thermal Energy Generated (MWH)	1085822.4	2298271.2	122379106.0				
17. Gross Electrical Energy Generated (MWH)	368361.0	779457.0	41114977.0				
18. Net Electrical Energy Generated (MWH)	347365.1	735222.9	38502151.6				
19. Unit Service Factor	100.0	100.0	70.1				
20. Unit Availability Factor	100.0	100.0	70.2				
21. Unit Capacity Factor (Using MDC Net)	96.1	96.5	54.1				
22. Unit Capacity Factor (Using DER Net)	96.1_	96.5	54.1				
23. Unit Forced Outage Rate	0.0	0.0	14.2_				
24. Shutdowns Scheduled Over Next 6 Months (1 of each: <u>Cycle 10/11 refuel outage June</u>	ype, Date, and 28, 1990 - 2 m	l Duration Ionths					
25. If Shutdown at End of Report Period, Est.	Date of Start	tup: <u>N/</u>	A				

(9/77)

REFUELING INFORMATION

DOCKET NO.	_50-0331
DATE	3-15-90
COMPLETED BY	Hai Tran
TELEPHONE.	(319) 851-7491

Name of facility. 1.

> Duane Arnold Energy Center а.

June, 1990 а.

- Scheduled date for restart following refueling. 3.
 - September, 1990 а.
- Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? 4.

Technical Specification change has been submitted to the NRC for 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 procedures. 6.

We will be getting GE 10 fuel.

- The number of fuel assemblies (a) in the core and (b) in the spent fuel 7. storage pool.
 - 944 a. 368 ь.
- 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. а. 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.

Scheduled date for next refueling shutdown. 2.

UNIT SHUTDOWNS AND POWER REDUCTIONS

Docket No.: 050-0331 Unit: Duane Arnold Energy Center Date: 03-15-90 Completed By: Hai Tran Telephone: (319) 851-7491

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REPORT MONTH: February 1990

No.	Date	Type(1)	Duration (Hours)	Reason(2)	Method of Shutting (3) Down Reactor	Licensee Event Report #	System Code (4)	Comp. Code (5)	Cause
	2-27-90	S	0.0	В	5	N/A	KA	P	The plant announced reduction in reactor power in preparation for maintenance on the "B" condensate pump's lower motor bearing due to a vibration problem. The bear- ing was replaced. Also minor maintenance was performed on the "B" reactor feedwater pump casing due to a small leak discovered on the pump's casing joint.
1 - F: S:	Forced Scheduled	2 -	Reason: A-Equipment B-Maintenan C-Refueling D-Regulator E-Operator G-Operation H-Other (Ex	Failure (E ce or Test Y Restricti Training & ative al Error (E plain)	xplain) on License Examina xplain)	3 - tion	Method 1-Manual 2-Manual 3-Automa 4-Contin 5-Reduce 9-Other	Scram tic Scr ued d Load (Explai	 4 - Exhibit G- Instructions for Preparation of Data am Entry Sheets for Licensee Event Repor (LER) File (NUREG- 0161) 5 - Exhibit 1- Same Source

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(9/77)

MAJOR/SAFETY RELATED MAINTENANCE

Docket No.: 050-0331 Unit: Duane Arnold Energy Center Date: 3-15-90 Completed By: Hai Tran Telephone: (319) 851-7491

02-14-90Standby Liquid Control System SystemValveA shrader valve inside the standby accumulator was replaced due to leal Air Compressor02-15-90"B" Standby Diesel Generator Residual Heat Removal SystemAir Compressor Valve Operating MechanismAir was leaking around the top cover unload valve. All the bolts were to to the stem was sheared. The motor operating mechanism was overhauled i lubricated per maintenance instruct:02-16-90Residual Heat Removal SystemValve Operating MechanismThe key that holds the anti-rotation to the stem was sheared. The motor operating mechanism was overhauled i lubricated per maintenance instruct:02-16-90Residual Heat Removal SystemValve Operating MechanismClutch trippers were found out of adjustment. Reset clutch trippers i installed ground strap on seat.02-28-90Condensate System"B" Pump MotorThe "B" condensate pump motor was experiencing increasing vibration. lower motor bearing was replaced.02-28-90Reactor Feedwater SystemCasingA casing leak in the "B" feedwater i was repaired.	DATE	SYSTEM	COMPONENT	DESCRIPTION
02-15-90"B" Standby Diesel GeneratorAir CompressorAir was leaking around the top cover unload valve. All the bolts were to unload valve. All the bolts were to to the stem was sheared. The motor operating mechanism was overhauled in lubricated per maintenance instruct;02-16-90Residual Heat Removal SystemValve Operating MechanismThe key that holds the anti-rotation operating mechanism was overhauled in lubricated per maintenance instruct;02-16-90Residual Heat Removal SystemValve Operating MechanismClutch trippers were found out of adjustment. Reset clutch trippers installed ground strap on seat.02-28-90Condensate System"B" Pump MotorThe "B" condensate pump motor was experiencing increasing vibration. lower motor bearing was replaced.02-28-90Reactor Feedwater SystemCasingA casing leak in the "B" feedwater in was repaired.	02-14-90	Standby Liquid Control System System	Valve	A shrader valve inside the standby liquid accumulator was replaced due to leakage.
02-16-90Residual Heat Removal SystemValve Operating MechanismThe key that holds the anti-rotation to the stem was sheared. The motor operating mechanism was overhauled a lubricated per maintenance instruct:02-16-90Residual Heat Removal SystemValve Operating MechanismClutch trippers were found out of 	02-15-90	"B" Standby Diesel Generator	Air Compressor	Air was leaking around the top cover of the unload valve. All the bolts were tightened.
02-16-90 Residual Heat Removal System Valve Operating Mechanism Clutch trippers were found out of adjustment. Reset clutch trippers installed ground strap on seat. 02-28-90 Condensate System "B" Pump Motor The "B" condensate pump motor was experiencing increasing vibration. lower motor bearing was replaced. 02-28-90 Reactor Feedwater System Casing A casing leak in the "B" feedwater was repaired.	02-16-90	Residual Heat Removal System	Valve Operating Mechanism	The key that holds the anti-rotation collar to the stem was sheared. The motor operating mechanism was overhauled and " lubricated per maintenance instruction.
02-28-90 Condensate System "B" Pump Motor The "B" condensate pump motor was experiencing increasing vibration. lower motor bearing was replaced. 02-28-90 Reactor Feedwater System Casing A casing leak in the "B" feedwater was repaired.	02-16-90	Residual Heat Removal System	Valve Operating Mechanism	Clutch trippers were found out of adjustment. Reset clutch trippers and installed ground strap on seat.
02-28-90 Reactor Feedwater System Casing A casing leak in the "B" feedwater was repaired.	02-28-90	Condensate System	"B" Pump Motor	The "B" condensate pump motor was experiencing increasing vibration. The lower motor bearing was replaced.
	02-28-90	Reactor Feedwater System	Casing	A casing leak in the "B" feedwater pump was repaired.
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NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO.	_050-0331
DATE	3-15-90
COMPLETED BY	Hai Tran
TELEPHONE	(319) 851-7491

02-01-90 At the beginning of the month the plant was operating at 99.9% of rated thermal power with 531 MWe-net being delivered to customers connected to the grid. There were no 50.73 reportable events during the month.

02-14-90 At 1302 hours, the plant entered a 7-day Limiting Condition for Operation (LCO) to perform maintenance on the shrader valve of the Standby Liquid Control accumulator due to its leakage. The LCO was cancelled at 1517 hours on the same day.

02-27-90

At 2014 hours, the plant began to reduce power to 294.5 MWe (approximately 45%) in preparation for planned maintenance on "B" condensate pump's lower motor bearing due to increasing vibration.

02-28-90

At the end of the month the plant was operating at 54.7% of rated thermal power delivering 274 MWe-net to customers connected to the grid.