

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9104100086 DOC.DATE: 91/02/28 NOTARIZED: NO DOCKET #
 FACIL:50-331 Duane Arnold Energy Center, Iowa Electric Light & Pow 05000331
 AUTH.NAME AUTHOR AFFILIATION
 TRAN,H. Iowa Electric Light & Power Co.
 WILSON,D.L. Iowa Electric Light & Power Co.
 RECIP.NAME RECIPIENT AFFILIATION

DAVIS,A.B. Region 3 (Post 820201)

SUBJECT: Monthly operating rept for Feb 1991 for Duane Arnold Energy
 Ctr.W/910311 ltr.

DISTRIBUTION CODE: IE24D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 7
 TITLE: Monthly Operating Report (per Tech Specs)

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD3-3 LA	3 3	PD3-3 PD	1 1
	HALL,J.R.	1 1		
INTERNAL:	ACRS	10 10	AEOD/DOA	1 1
	AEOD/DSP/TPAB	1 1	NRR/DLPQ/LPEB1.0	1 1
	NRR/DOEA/OEAB	1 1	REG FILE 01	1 1
	RGN3	1 1		
EXTERNAL:	EG&G BRYCE,J.H	1 1	NRC PDR	1 1
	NSIC	1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 24 ENCL 24

R
I
D
S
/
A
D
D
S
/
A
D
D
S

Iowa Electric Light and Power Company

March 11, 1991
DAEC-91-0184

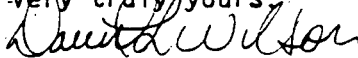
Mr. A. Bert Davis
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License DPR-49
February 1991 Monthly Operating Report

Dear Sirs:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for February 1991. The report has been prepared in accordance with the guidelines of NUREG-0020 and distribution has been made in accordance with DAEC Technical Specifications, Section 6.11.1.c.

Very truly yours,



David L. Wilson
Plant Superintendent - Nuclear

DLW/ht/pwj
Enclosures
File A-118d

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

Mr. S. P. Sands
Project Manager
1 Whiteflint North
Mail Stop 13E21
11555 Rockville Pike
Rockville, MD 20852

INPO Records Center
1100 Circle 75 Parkway
Suite 1500
Atlanta, GA 30339-3064

Mr. Steve Brown
Iowa State Utilities Board
Lucas State Office Building
Des Moines, IA 50319

Mr. Fred Yost
Director, Research Services
Utility Data Institute
1700 K St. NW, Suite 400
Washington, DC 20006

Mr. William Loveless
U. S. NRC
1 Whiteflint North
Mail Stop 11C14
11555 Rockville Pike
Rockville, MD 20852 (2)

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, GA 30068-8237



OPERATING DATA REPORT

DOCKET NO. 050-0331
DATE 03-15-91
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: February 1991
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>672.0</u>	<u>1416.0</u>	<u>140928.0</u>
12. Number of Hours Reactor Was Critical	<u>579.2</u>	<u>1141.6</u>	<u>101652.4</u>
13. Reactor Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>192.8</u>
14. Hours Generator On-Line	<u>569.3</u>	<u>1088.8</u>	<u>98797.0</u>
15. Unit Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>896508.0</u>	<u>1738637.6</u>	<u>131451871.6</u>
17. Gross Electrical Energy Generated (MWH)	<u>299869.0</u>	<u>578644.0</u>	<u>44132535.0</u>
18. Net Electrical Energy Generated (MWH)	<u>280983.7</u>	<u>541275.2</u>	<u>41358976.4</u>
19. Unit Service Factor	<u>84.7</u>	<u>76.9</u>	<u>70.1</u>
20. Unit Availability Factor	<u>84.7</u>	<u>76.9</u>	<u>70.2</u>
21. Unit Capacity Factor (Using MDC Net)	<u>77.7</u>	<u>71.1</u>	<u>56.5</u>
22. Unit Capacity Factor (Using DER Net)	<u>77.7</u>	<u>71.1</u>	<u>54.5</u>
23. Unit Forced Outage Rate	<u>15.3</u>	<u>12.2</u>	<u>13.8</u>
24. Shutdowns Scheduled Over Maxt 6 Months (Type, Date, and Duration of each: <u>N/A</u>)			
25. If Shutdown at End of Report Period, Est. Date of Startup: <u>N/A</u>			

(9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
DATE 03-15-91
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

MONTH February 1991

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	518.0
2	521.0
3	495.0
4	514.0
5	527.0
6	527.0
7	596.0
8	527.0
9	365.0
10	0.0
11	0.0
12	0.0
13	0.0
14	290.0
15	441.0

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
16	486.0
17	494.0
18	507.0
19	507.0
20	508.0
21	504.0
22	508.0
23	507.0
24	477.0
25	506.0
26	504.0
27	504.0
28	501.0
29	N/A
30	N/A
31	N/A

REFUELING INFORMATION

DOCKET NO. 50-0331
DATE 03-15-91
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

1. Name of facility.
 - a. Duane Arnold Energy Center
2. Scheduled data for next refueling shutdown.
 - a. March 1, 1992
3. Scheduled date for restart following refueling.
 - a. May 1, 1992
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?

N/A
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.

N/A
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: February 1991

Docket No.: 050-0331
Unit: Duane Arnold Energy Center
Date: 03-15-91
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.	02-09-91	F	102.7	H	3	91-003	N/A	N/A	While operating at full power, a reactor scram occurred due to a sensed low control oil pressure at the Main Turbine Control valves. Troubleshooting identified induced electrical noise in the Turbine Elector-Hydraulic Control (EHC) System, which appeared to have caused the pressure fluctuation in EHC control oil.

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
 Unit: Duane Arnold Energy Center
 Date: 03-15-91
 Completed By: Hai Tran
 Telephone: (319) 851-7491

DATE	SYSTEM	COMPONENT	DESCRIPTION
02-07-91	'B' Residual Heat Removal (RHR) System	Limiterque Operators	The limiterque operators of various 'B' pump suction valves were overhauled. Two current ammeters for the RHR pump motors were inspected and calibrated. Also, oil samples were taken from the pump motors for analysis.
02-09-91	Turbine Electro-Hydraulic Control (EHC) System	Speed Error Circuitry	The speed error circuitry was found out of adjustment and readjusted, also the circuit cables were shielded to eliminate potential noise sources. The mechanical overspeed limit switch of the EHC system was found sticky and recalibrated.
02-15-91	'B' Emergency Diesel Generator	Lube Oil Temperature Indicator	The lube oil temperature indicator was found indicating inaccurately and readjusted. The lube oil temperature was verified within the specified temperature range.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO. 050-0331
DATE 03-15-91
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

02-01-91 The plant was operating at 99.7% of rated thermal power delivering 518.0 MWe to the grid. There was one 10 CFR 50.73 reportable event during the month.

02-09-91 At 1659 hours, a reactor scram from 100% power occurred due to a sensed low control oil pressure at the Main Turbine Control valves. Extensive troubleshooting following the event identified induced electrical noise in the Turbine Electro-Hydraulic (EHC) System which appeared to have ultimately caused the pressure fluctuation in EHC control oil. Corrective actions were to eliminate potential noise sources identified during troubleshooting. All automatic actions occurred as designed as a result of the scram. Operator actions were appropriate and expeditiously returned the plant to a stable condition.

LER 91-003

02-13-91 At 0955 hours, reactor startup commenced. The reactor was taken to critical at 1350 hours. The generator was synchronized to the grid at 2342 hours.

02-17-91 Reactor power was limited to 97% due to potential drifting of the feedwater flow transmitter. This limitation will remain in effect until the transmitters are replaced.

01-28-91 At the end of the month the plant was operating at 96.6% of rated thermal power delivering 501.0 MWe to the grid.