ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8904260126 DOC.DATE: 89/03/31 NOTARIZED: NO DOCKET #
FACIL:50-331 Duane Arnold Energy Center, Iowa Electric Light & Pow 05000331
AUTH.NAME AUTHOR AFFILIATION
MILLER,L. Iowa Electric Light & Power Co.
HANNEN,R.L. Iowa Electric Light & Power Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating rept for Mar 1989.W/890415 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	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD3-3 LA	4	4	PD3-3 PD	1	1
	HALL,J.R.	1	1			
INTERNAL:	ACRS	10	10	AEOD/DOA	1	1
	AEOD/DSP/TPAB	1	1	IRM TECH ADV	2	2
	NRR/DLPQ/PEB 11	1	1	NRR/DOEA/EAB 11	1	1
	NRR/DREP/RPB 10	1	1	NUDOCS-ABSTRACT	1	1
	REG FILE 01	1	1	RGN3	1	1
EXTERNAL:	EG&G SIMPSON,F	1	1	EG&G WILLIAMS,S	1	1
	LPDR	1	1	NRC PDR	1	1
	NSIC	1	1			

RIDS/ADDS

RIDS/ADDS

monthly Rpt ltr

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 31 ENCL 31

DCD

PRIORITY ROUTING

First		Second
RA		RC
DRA		FIC
DRP		SCA
DRS		HL
DRSS		IC
DRMA		OE
		EAD

ORO+1

FILE

Iowa Electric Light and Power Company

April 15, 1989
DAEC-89-0288

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
March 1989 Monthly Operating Report

Dear Sirs:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for March, 1989. 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.

Very truly yours,

Rick Hannen 4-14-89

Rick L. Hannen
Plant Superintendent - Nuclear

RLH/LDM/go
Enclosures
File A-118d

cc: U. S. NRC
ATTN: Document Control Desk
Washington, D. C. 20555

Mr. J. R. Hall
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

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

Mr. Phillip Ross
U.S. NRC
Maryland National Bank Building
Washington, D.C. 20555 (2)

NRC Resident Inspector

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

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

monthly rpt

IE 24

APR 17 1989

OPERATING DATA REPORT

DOCKET NO. 050-0331
DATE 04-15-89
COMPLETED BY Lonnie Miller
TELEPHONE (319) 851-7204

OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: March 1989
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	774.0	2160.0	124152.0
12. Number of Hours Reactor Was Critical	506.1	1741.4	88689.9
13. Reactor Reserve Shutdown Hours	0	0	192.8
14. Hours Generator On-Line	460.3	1462.6	86104.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	756976.8	2238304.8	112277973.4
17. Gross Electrical Energy Generated (MWH)	260381.0	762560.0	37694786.0
18. Net Electrical Energy Generated (MWH)	243794.2	672079.0	35295365.0
19. Unit Service Factor	61.9	67.7	69.3
20. Unit Availability Factor	61.9	67.7	69.3
21. Unit Capacity Factor (Using MDC Net)	60.9	57.8	52.8
22. Unit Capacity Factor (Using DER Net)	60.9	57.8	52.8
23. Unit Forced Outage Rate	5.0	23.0	14.4

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each: October, 1989, Planned Maintenance
25. If Shutdown at End of Report Period, Est. Date of Startup: N/A

(9/77)

IE24

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
DATE 04-15-89
COMPLETED BY Lonnie Miller
TELEPHONE (319) 851-7204

MONTH March 1989

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	541	16	140
2	540	17	449
3	538	18	490
4	538	I9	448
5	153	20	499
6	0	21	530
7	0	22	531
8	0	23	529
9	0	24	534
10	0	25	513
11	0	26	525
12	0	27	529
13	0	28	530
14	0	29	540
15	0	30	539
		31	544

REFUELING INFORMATION

DOCKET NO. 050-0331
DATE 04-15-89
COMPLETED BY Lonnie Miller
TELEPHONE (319) 851-7204

1. Name of facility.

   a. Duane Arnold Energy Center

2. Scheduled date for next refueling shutdown.

   a. April, 1990

3. Scheduled date for restart following refueling.

   a. July, 1990

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?

   None identified at this time.

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. None

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.

   a. 368 b. 944

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. 2000

Docket No.: 050-0331
Unit: Duane Arnold Energy Center
Date: 04-15-89
Completed By: Lonnie Miller
Telephone: (319) 851-7204

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: March 1989

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	3-5-89	F	24.0	A	3	89-008	JM	CL	Steam line isolation valve closed due to a failed DC solenoid valve caused by a failed solenoid coil. The moisture intrusion was due to an inadequate maintenance repair procedure.
2	3-6-89	S	259.7	B	4	N/A	N/A	N/A	Remained off line to perform planned maintenance on a steam line drain valve. Addtional work performed on a MSIV and the steam supply valve to the HPCI system.

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

(9/77)

MAJOR/SAFETY RELATED MAINTENANCE

Docket No.: 050-0331
Unit: Duane Arnold Energy Center
Date: 04-15-89
Completed By: Lonnie Miller
Telephone: (319) 851-7204

DATE	SYSTEM	COMPONENT	DESCRIPTION
03/06/89	Main Steam Line Isolation Valve	Solenoid Valve	A steam line isolation valve closed due to moisture instrusion into a solenoid valve. The solenoid valve was replaced.
03/15/89	HPCI Steam Supply Valve	Motor-Operated Valve	A valve had a packing leak. The packing was tightened and stem work was performed.
03/16/89	Main Steam Line Drain Valve	Motor-Operated Valve	Valve had a packing leak. New packing was installed.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO. 050-0331
DATE 04-15-89
COMPLETED BY Lonnie Miller
TELEPHONE (319) 851-7204

3-1-89 At the beginning of the month the Duane Arnold Energy Center was operating at 100% thermal power with 544 MWe-net being supplied to the grid. There were two reportable events during the month.

3-2-88 An isolation of HPCI occurred due to a signal from the SLDS logic. Troubleshooting revealed an internal problem within test switches between the thermocouples and SLDS temperature detection modules was resulting in simulated open thermocouple wire signals, which were being detected by upgraded modules installed in 1988. Following removal of the test switches from its SLDS circuitry, HPCI was returned to service on March 3, 1989. The test switches were removed from the RCIC and Reactor Water Cleanup SLDS logic shortly thereafter. Long-term corrective actions include modification of the test circuitry and examination of the test switches.

89-006

3-5-89 With the reactor operating at 100% power, calibration of the Main Steam Line Radiation Monitors was in progress when the 'B' Outboard Main Steam Line Isolation Valve (MSIV) unexpectedly closed due to a failed DC solenoid. The isolation of the 'B' Main Steam Line (MSL) resulted in flow in the remaining three main steam lines exceeding the high flow limit of 140%. In accordance with design this resulted in isolation of all Main Steam Lines. When MSIV's reached the less than 90% open position, an automatic reactor scram occurred. Reactor pressure peaked at approximately 1126 PSIG and was controlled with the use of four pressure relief valves. All safety systems performed as expected and operator response was appropriate.

The cause of the failed solenoid coil was moisture intrusion. The source for the moisture was condensation from a nearby minor steam leak. The solenoid enclosure was susceptible to moisture intrusion as a result of inadequate torquing of a threaded cover for the enclosure during previous maintenance activities in December 1988. The lack of proper torquing was due to an inadequate maintenance repair procedure. The failed solenoid was replaced. Other MSIV fast closure solenoids were inspected for moisture intrusion and the enclosures were properly torqued. The repair procedure has been revised.

LER 89-008

03-31-89 At the end of the month the plant was operating at 100% power with 540 MWe-net being supplied to the grid.