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Iowa Electric Light and Power Company

September 15, 1992
NG-92-4317

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
August 1992 Monthly Operating Report

Dear Mr. Davis:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for August 1992. 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,

Keith D. Young

Keith D. Young
Manager, Nuclear Licensing

KDY/RBW/pjv
Enclosures
File A-118d

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OPERATING DATA REPORT

DOCKET NO. 050-0331
 DATE: 09-15-92
 COMPLETED BY: Richard Woodward
 TELEPHONE: (319) 851-7318

OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: August 1992
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): 545
7. Maximum Dependable Capacity (Net MWe): 515
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	744.0	5855.0	154127.0
12. Number of Hours Reactor Was Critical	612.4	4344.8	113133.1
13. Reactor Reserve Shutdown Hours	.0	.0	192.8
14. Hours Generator On-Line	596.3	4283.5	110191.6
15. Unit Reserve Shutdown Hours	.0	.0	.0
16. Gross Thermal Energy Generated (MWH)	953873.7	6509307.1	149562903.5
17. Gross Electrical Energy Generated (MWH)	315570.0	2158867.5	50125193.5
18. Net Electrical Energy Generated (MWH)	295691.6	2018569.2	46983081.3
19. Unit Service Factor	80.2	73.2	71.5
20. Unit Availability Factor	80.2	73.2	71.5
21. Unit Capacity Factor (Using MDC Net)	77.2	66.9	60.1*
22. Unit Capacity Factor (Using DER Net)	73.9	64.1	58.0*
23. Unit Forced Outage Rate	13.0	2.0	12.7
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each:	<u>N/A</u>		

25. If Shutdown at End of Report Period, Est. Date of Startup: N/A

*Corrected Cumulative Capacity Factors to account for 8/1/85 uprate from 1593 MWth to 1658 MWth. Previous reports based capacity factors on current DER and MDC.

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
 DATE: 09-15-92
 COMPLETED BY: Richard Woodward
 TELEPHONE: (319) 851-7318

MONTH August 1992

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

1	<u>517</u>
2	<u>507</u>
3	<u>518</u>
4	<u>527</u>
5	<u>508</u>
6	<u>526</u>
7	<u>509</u>
8	<u>511</u>
9	<u>506</u>
10	<u>513</u>
11	<u>517</u>
12	<u>519</u>
13	<u>523</u>
14	<u>523</u>
15	<u>522</u>

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

16	<u>520</u>
17	<u>150</u>
18	<u>-5</u>
19	<u>-4</u>
20	<u>-11</u>
21	<u>-10</u>
22	<u>-12</u>
23	<u>93</u>
24	<u>401</u>
25	<u>455</u>
26	<u>513</u>
27	<u>512</u>
28	<u>489</u>
29	<u>517</u>
30	<u>506</u>
31	<u>458</u>

REFUELING INFORMATION

DOCKET NO. 50-0331
DATE: 09/15/92
COMPLETED BY: Richard Woodward
TELEPHONE: (319) 851-7318

1. Name of facility.
 - a. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown.
 - a. July, 1993
3. Scheduled date for restart following refueling.
 - a. September, 1993
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, (b) in the spent fuel storage pool.
 - a. 368 b. 1152
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 1992

Docket No: 050-0331
Unit: Duane Arnold Energy Center
Date: 09/15/92
Completed by: Richard Woodward
Telephone: (319) 851-7318

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	08/17/92	F	89.0	A	3	92-0013	AD	FT	Perceived high average power range neutron flux, caused by electro-magnetic signal noise, which reduced flow biased set-points to below the current power level.
2	08/21/92	S	58.7	B	4	N/A	AD	MG	Entered pre-planned forced outage workscope.

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: 09-15-92

COMPLETED BY: Richard Woodward

Telephone: (319) 851-7318

DATE	SYSTEM	COMPONENT	DESCRIPTION
8/21/92	Turbine Steam Seals & Drains	Extraction Line	High Pressure Turbine Exhaust line leaked at 30° elbow due to corrosion. Replaced pipe and verified no leakage.
8/25/92	Reactor Vessel Recirculation	Recirc Pump Motor Generator Set	Scoop tube signal control failures caused intermittent lock-ups. Faulty speed controller replaced. Verified proper speed control with exchanged unit.
8/31/92	Instrument Air	Piping downstream of receiver	During maintenance piping failed at solder joint. Operators immediately responded, manually reconnecting the line allowing systems to be restarted. Mechanics installed pipe elbow.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO: 050-0331

DATE: 09/15/92

COMPLETED BY: Richard Woodward

TELEPHONE: (319) 851-7318

Monthly Operational Overview for August, 1992

At the beginning of August, DAEC was operating at full power delivering 517 MWe to the grid. The plant scrambled at 7:19 August 17. The plant commenced a pre-planned 5 day outage, synchronizing back onto the grid at 11:00 August 23. The following table summarized capacity factor losses for the month.

Generator off-line	19.5%
Equipment Limitation	1.9%
Startup/rod movements	2.2%
Load-following	0.5%
Seasonal Losses	<u>0.9%</u>
Total	25.0%

On the last day of the month the DAEC had reduced power to 66% during repair of a three inch instrument air line break.

On August 17, 1992, with the plant operating at 100% power, an automatic reactor scram was initiated due to a perceived high average power range neutron flux level. The cause was a noise signal which affected the reactor recirculation flow signals, thereby reducing the flow-biased scram setpoint below the current operating power level. Reactor level lowered as expected below the low level trip setpoint in response to the scram and all required primary containment isolations were automatically initiated. Reactor level was promptly restored to the normal band with normal feedwater control.

Corrective actions for the event include installation of circuit inductors on the effected flow transmitters and added restrictions on the use of potential noise signal sources.

LER 92-0013 (pending)

On August 31, 1992, with the plant operating at 100% power, a Reactor Water Cleanup (RWCU) Primary Containment Isolation System (PCIS) isolation occurred during performance of an Electrical Protection Assembly (EPA) surveillance test. At the beginning of the surveillance, the 'A' RPS power was transferred to the Alternate Power Source. Since the power supply transfer causes a momentary loss of power to the 'A' RPS bus, the surveillance procedure directs that the relay which initiates an 'A' side RWCU isolation be held in position until the transfer is complete to allow the RWCU system to remain on line. Although the relay was manually held in place during the transfer, the RWCU system isolated (Group V isolation). Following completion of the transfer, the isolation was satisfactorily reset and RWCU was restored to operation. All notifications were completed and a deviation report was written.

Later that day at 2010, a loss of 'A' RPS occurred causing a half scram as well as giving an 'A' side PCIS groups I through V half isolation. At the time, the 'B' RPS was being powered by the alternate RPS power supply in preparation for calibration of the 'B' RPS EPA breakers. All valves operated as expected. An operator reported from the essential switchgear room that 'A' RPS EPA breakers had tripped. All work on the 'B' RPS EPA breakers was stopped. The instrument technicians verified the trip setpoints as well as the time delay setpoints on the EPA-A1 breaker. No problems were found. At 2214 hrs the 'A' EPA breakers were reset, the half scram was reset, and the PCIS isolations were reset. A deviation report was written.

LER 92-0014 (pending)