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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating rept for Jul 1990 for Duane Arnold Energy
 Ctr.W/900815ltr.

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Iowa Electric Light and Power Company

August 15, 1990

DAEC-90-0590

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
July 1990 Monthly Operating Report

Dear Sirs:

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

Very truly yours,

Rick L. Hannen 8-13-90
Rick L. Hannen
Plant Superintendent - Nuclear

RLH/ht
Enclosures
File A-118d

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OPERATING DATA REPORT

DOCKET NO. 050-0331
DATE 08-15-90
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: July 1990
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>744.0</u>	<u>5087.0</u>	<u>135839.0</u>
12. Number of Hours Reactor Was Critical	<u>.0</u>	<u>4206.3</u>	<u>98075.9</u>
13. Reactor Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>192.8</u>
14. Hours Generator On-Line	<u>.0</u>	<u>4185.9</u>	<u>95393.9</u>
15. Unit Reserve Shutdown Hours	<u>.0</u>	<u>.0</u>	<u>.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>.0</u>	<u>6312158.4</u>	<u>126392993.2</u>
17. Gross Electrical Energy Generated (MWH)	<u>.0</u>	<u>2105327.0</u>	<u>42440847.0</u>
18. Net Electrical Energy Generated (MWH)	<u>-1334.3</u>	<u>1977541.4</u>	<u>39783671.0</u>
19. Unit Service Factor	<u>.0</u>	<u>82.3</u>	<u>70.2</u>
20. Unit Availability Factor	<u>.0</u>	<u>82.3</u>	<u>70.4</u>
21. Unit Capacity Factor (Using MDC Net)	<u>.0</u>	<u>72.3</u>	<u>56.6</u>
22. Unit Capacity Factor (Using DER Net)	<u>.0</u>	<u>72.3</u>	<u>54.4</u>
23. Unit Forced Outage Rate	<u>N/A</u>	<u>2.1</u>	<u>13.9</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each: <u>Cycle 10/11 refuel outage, June 28, 1990 - 69 days</u>)			
25. If Shutdown at End of Report Period, Est. Date of Startup: <u>September 6, 1990</u>			

(9/77)

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
DATE 08-15-90
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

MONTH July 1990

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	.0
2	.0
3	.0
4	.0
5	.0
6	.0
7	.0
8	.0
9	.0
10	.0
11	.0
12	.0
13	.0
14	.0
15	.0

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

16	.0
17	.0
18	.0
19	.0
20	.0
21	.0
22	.0
23	.0
24	.0
25	.0
26	.0
27	.0
28	.0
29	.0
30	.0
31	.0

REFUELING INFORMATION

DOCKET NO. 50-0331
DATE 08-15-90
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

1. Name of facility.
 - a. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown.
 - a. Unit was shutdown on June 28, 1990 for refueling.
3. Scheduled date for restart following refueling.
 - a. September 6, 1990
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?

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 been submitted to the NRC for approval.

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

M/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.

104 GE-10 fuel assemblies were stored in the spent fuel storage pool for the upcoming refuel outage.

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.
 - a. 0
 - b. 1416
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: July 1990

Docket No.: 050-0331

Unit: Duane Arnold Energy Center

Date: 08-15-90

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	06-28-90	S	744.0	C	1	N/A	N/A	N/A	The plant was in cold shutdown for the cycle 10/11 refuel outage since June 28, 1990, and scheduled to startup on September 6, 1990.

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: 08-15-90
 Completed By: Hai Tran
 Telephone: (319) 851-7491

DATE	SYSTEM	COMPONENT	DESCRIPTION
07-01-90	Control Rod Drive (CRD) System.	CRD Hydraulic Lines.	CRD lines repair project was under way. Engineering analysis and evaluation, and root cause identification on leaking lines were continuing.
07-02-90	Main Steam Line (MSL) System.	Main Steam Isolation Valves (MSIV)	Various maintenance, testing, and modifications were in progress to all MSIVs.
07-02-90	Cooling Tower	Cooling Tower Structures.	Installation of fill and structural repairs were underway.
07-02-90	Reactor Water Cleanup System (RWCS), and Extraction Steam (ES) System.	Pipes.	Replacement of the old piping.
07-10-90	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.
07-10-90	Standby Diesel Generator System (EDGS).	Diesel Engines.	Maintenance and inspection on two diesel engines.

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO. 050-0331
DATE 08-15-90
COMPLETED BY Hai Tran
TELEPHONE (319) 851-7491

07-01-90 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.

07-09-90 At approximately 1033 hours, a loss of offsite power to essential buses 1A3 and 1A4 occurred when the Standby Transformer was inadvertently de-energized. At the time of the event, the plant was in cold shutdown with the vessel completely defueled to the spent fuel pool and the reactor cavity flooded. Essential power was being supplied by the Standby Transformer due to the Startup Transformer being out of service for maintenance. Several 'A' side safety systems were out of service for maintenance, including the 'A' Standby diesel generator (bus 1A3). Upon loss of power, the 'B' Standby diesel generator started and picked up loads on essential bus 1A4. The cause of this event was determined to be a personnel error by a non-nuclear utility system protection technician who failed to block trip signals during a breaker failure relay test. The task being performed was not covered by an approved procedure. Corrective actions will be to proceduralize DAEC Switchyard tasks which have the potential to cause a loss of power, or significant loss of load, to the plant. Additionally, a set of standard work practices for switchyard work has been developed to better control this work. This event had no effect on the safe operation of the plant. The 'B' Standby diesel generator started immediately to power essential loads and offsite power was restored in 37 minutes.

(LER 90-007)

07-09-90 Three unplanned partial actuations of both the Primary Containment Isolation System (PCIS) Group III isolation logic and the Standby Gas Treatment (SBGT) initiation logic occurred. However, neither system was required to be operable due to the reactor being in cold shutdown condition, defueled, and no fuel movement in progress. The systems responded as expected to the actuations and, upon verifying the cause for the actuations, both systems were reset. All the events occurred while electricians were working outage modifications in Control Room panels. The root cause of the first event appears to be due to a loose terminal lug screw. The root cause of the second event is due to the restricted workspace in the panel that occasioned the actuation. The root cause of the third event is personnel error due to a failure to notify Operations personnel prior to the actuation.

(LER 90-008)

07-30-90 It was discovered an inadequate fire barrier existed between the Cable Spreading Room and the Control Room. A gap running along the top of a wall was found to contain material that was not three (3) hour fire rated as required. Root cause analysis and consideration of corrective actions is continuing.

(LER 90-009 - pending)

07-31-90 At the end of the month the plant was in cold shutdown for the cycle 10/11 refuel outage.