

IES UTILITIES INC.

November 15, 1994
NG-94-4114

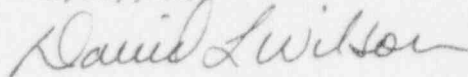
Mr. John B. Martin
Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4351

Subject: Duane Arnold Energy Center
Docket No: 50-331
Operating License DPR-49
October 1994 Monthly Operating Report

Dear Mr. Martin:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for October 1994. 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 Wilson
Plant Superintendent, Nuclear

DLW/RBW/cc
Enclosures
File A-118d
cc:

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-37
Washington, D.C. 20555-0001 (Orig.)

Mr. Glenn Kelly
Project Manager
1 Whiteflint North
Mail Stop 13E21
11555 Rockville Pike
Rockville, MD 20852

Document Control Desk
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. Dennis Murdock
Central Iowa Power Cooperative
Box 2517
Cedar Rapids, IA 52405

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

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

DCRC
NRC Resident Inspector

290113

9411300247 941031
PDR ADDCK 05000331
R PDR

Duane Arnold Energy Center • 3277 DAEC Road • Palo, Iowa 52024 • 319/851-7611
An IES INDUSTRIES Company

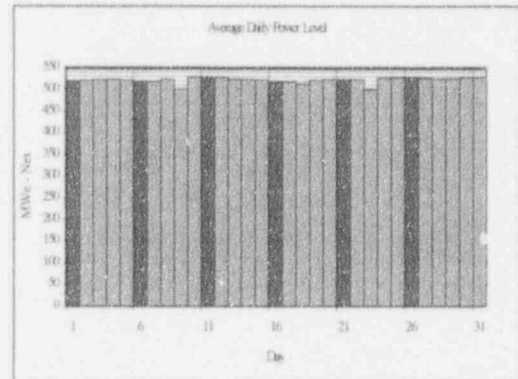
JE24

OPERATING DATA REPORT

DOCKET NO: 50-0331
 DATE: 11/15/94
 Unit: Duane Arnold Energy Center
 COMPLETED BY: Richard Woodward
 TELEPHONE: (319) 851-7318

OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: October 1994
3. Licensed Thermal Power (MW_{th}): 1658
4. Nameplate Rating (Gross MW_e DER): 565.7 (Turbine)
5. Design Electrical Rating (Net MW_e DER): 538
6. Maximum Dependable Capacity (Gross MW_e MDC): 545
7. Maximum Dependable Capacity (Net MW_e MDC): 515
8. If Changes Occur in Capacity Ratings (Items Number 3 through 7) since the last report, Give Reasons: Not Applicable
9. Power Level to Which Restricted, If Any (Net MW_e): Not Applicable
10. Reasons for Restrictions, If Any: Not Applicable



		October-94	Year	Cummulative
11.	Hours in Reporting Period	745.0	7,296.0	173,112.0
12.	Number of Hours Reactor Was Critical	745.0	7,037.2	129,981.8
13.	Reactor Reserve Shutdown Hours	0.0	0.0	192.8
14.	Hours Generator On-Line	745.0	6,967.9	126,746.6
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,229,944.9	11,353,565.4	175,812,129.6
17.	Gross Electrical Energy Generated (MWH)	412,420.0	3,790,207.0	58,870,592.5
18.	Net Electrical Energy Generated (MWH)	388,987.3	3,569,278.8	55,200,941.7
19.	Unit Service Factor	100.0%	95.5%	73.2%
20.	Unit Availability Factor	100.0%	95.5%	73.2%
21.	Unit Capacity Factor (Using MDC Net)	101.4%	95.0%	63.2%
22.	Unit Capacity Factor (Using DER Net)	97.1%	90.9%	60.5%
23.	Unit Forced Outage Rate	0.0%	2.8%	11.4%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): Refueling Outage Feb. 23, 1995, 54 days
25. If Shutdown at End of Report Period, Est. Date of Startup: Not Applicable

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-0331DATE: 11/15/94Unit: Duane Arnold Energy CenterCOMPLETED BY: Richard WoodwardTELEPHONE: (319) 851-7318MONTH October 1994

Day	Average Daily Power Level (MWe-Net)
1	519.4
2	521.5
3	522.6
4	523.2
5	522.1
6	518.0
7	517.1
8	523.8
9	501.3
10	528.8
11	528.3
12	529.0
13	524.7
14	523.8
15	522.3
16	516.4
17	517.7
18	514.0
19	522.3
20	523.9
21	523.2
22	523.3
23	500.2
24	526.8
25	528.3
26	528.5
27	527.7
28	525.4
29	525.6
30	528.4
31	528.2

REFUELING INFORMATION

DOCKET NO: 50-0331
 DATE: 11/15/94
 Unit: Duane Arnold Energy Center
 COMPLETED BY: Richard Woodward
 TELEPHONE: (319) 851-7318

1. Name of facility.

Duane Arnold Energy Center

2. Scheduled date for next refueling shutdown.

February 23, 1995

3. Scheduled date for restart following refueling.

April 17, 1995

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

Removal of MSIV LCS (RTS-232)
 ISI Relief Request based on Hydrogen Water Chemistry
 ISI Interval Extension (RTS-261)
 Code Relief Criteria Revision (RTS-270)
 MSIV Repair Relief Request (RR-002, Rev.2)
 Rod Block Test Requirements Revision (RTS-266)
 Chapter 3.6 Rewrite (RTS-197A)

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

Already submitted

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.

No

7. Current and projected fuel assemblies inventory:

	Number of Fuel Assemblies	Projected date of last refueling that can be discharged
currently installed in reactor core	368	n/a
previously discharged from core to Spent Fuel Storage Pool	1280	n/a
under present physical capacity of Spent Fuel Storage Pool	1898	2001
under planned capacity of Spent Fuel Storage Pool following re-racking (currently under construction)	2411	2007
under Licensed Capacity of Spent Fuel Storage Pool	3152	2014

DOCKET NO: 50-0331
 DATE: 11/15/94
 Unit: Duane Arnold Energy Center
 COMPLETED BY: Richard Woodward
 TELEPHONE: (319) 851-7318

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: October 1994

There were no shutdowns or power reductions greater than 20% during the month

No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	System Code (4)	Comp. Code (5)	Cause

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 I (Same Source)

DOCKET NO.: 50-0331
 DATE: 11/15/94
 Unit: Duane Arnold Energy Center
 COMPLETED BY: Richard Woodward
 TELEPHONE: (319) 851-7318

Monthly Operational Overview for October 1994:

The DAEC reduced power for monthly Turbine Valve and Main Steam Isolation Valve surveillances and Control Rod Drive exercises between 00:00 and 07:00 a.m. on Sunday, October 9. Forgone electrical generation during the downpower was the equivalent of slightly more than one full-power hour of production. The DAEC reduced power for a control rod sequence exchange to increase load line between 12:00 a.m. and 12:00 p.m. on Sunday, October 23. Forgone electrical generation during the power reduction was a little more than the equivalent of one full-power hour of production.

Allocation of Production & Losses:

	Electrical Output MWe	Capacity Factor % of 565.7 MWe (Design Gross Rating)	Full Power Equivalent Hours
Actual Metered Net Electric Output	522.8	92.4%	687.4
Actual Metered Plant Electric Loads	31.5	5.6%	41.6
Weather (seasonal losses, condenser pressure greater than design)	1.1	0.3%	2.3
Turbine Valve Surveillance, Control Rod Drive Exercises 10/9, 10/23	1.6	0.0%	0.0
Other Capacity MWe Losses (Operating at less than full thermal power)	0.8	0.4%	3.0
Efficiency MWe Losses (thermal conversion @ less than full design output)	7.9	1.4%	10.7
Design Electric Output	565.7	100.1%	745.0

On October 4, 1994, with the plant operating at 100% power, during the performance of a surveillance test, four out of eight Essential Bus Degraded Voltage relays were found high outside Technical Specification (TS) voltage limits and a fifth high outside the time delay limit. The relays were re-calibrated and returned to service. Analysis of the relay failures led to developing an improved calibration technique. The improved test was re-performed, and on October 17, 1994 all eight relays were found low outside the TS voltage limits. Corrective actions include recalibrating the relays, procedure revisions, increased surveillance and trending, and engineering reviews for generic implications. Review indicated safety-related equipment served by these relays would have remained capable of performing their safety functions. (LER #94-12)

Licensing Action Summary:

Plant Availability:	100.0%	Unplanned Auto Scrams (while/critical) this month:	0
Number of reportable events:	1	Unplanned Auto Scrams (while/critical) last 12 months:	1