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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8812290246 DOC. DATE: 88/11/30 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 Nov 1988 for Duane Arnold Energy Ctr. W/881215 ltr.

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OPERATING DATA REPORT

DOCKET NO. 050-0331
 DATE 12-15-88
 COMPLETED BY Lonnie Miller
 TELEPHONE (319) 851-7204

OPERATING STATUS

Notes

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: November 1988
3. Licensed Thermal Power (MMt): 1658
4. Nameplate Rating (Gross MWe): 565 (Turbine)
5. Design Electrical Rating (Nat MWe): 538
6. Maximum Dependable Capacity (Gross MWe): 565
7. Maximum Dependable Capacity (Nat 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 (Nat MWe): Reactor shutdown for refueling/maintenance.
10. Reasons for Restrictions, If Any: Reactor shutdown for refueling/maintenance.

	This Month	Yr-to-Date	Cumulative
11. Hours in Reporting Period	<u>720.0</u>	<u>8040.0</u>	<u>121248.0</u>
12. Number of Hours Reactor Was Critical	<u>0.0</u>	<u>6437.0</u>	<u>86776.0</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>192.8</u>
14. Hours Generator On-Line	<u>0.0</u>	<u>6386.2</u>	<u>84641.6</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MMH)	<u>0.0</u>	<u>10002352.2</u>	<u>110039668.6</u>
17. Gross Electrical Energy Generated (MMH)	<u>0.0</u>	<u>3372398.0</u>	<u>36932226.0</u>
18. Net Electrical Energy Generated (MMH)	<u>0.0</u>	<u>3177895.3</u>	<u>34623286.9</u>
19. Unit Service Factor	<u>0.0</u>	<u>79.4</u>	<u>69.8</u>
20. Unit Availability Factor	<u>0.0</u>	<u>79.4</u>	<u>69.8</u>
21. Unit Capacity Factor (Using MDC Nat)	<u>0.0</u>	<u>73.5</u>	<u>53.1</u>
22. Unit Capacity Factor (Using DER Nat)	<u>0.0</u>	<u>73.5</u>	<u>53.1</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>1.0</u>	<u>14.4</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): <u>Present Refueling Outage started September 29, 1988.</u>			
25. If Shutdown at End of Report Period, Est. Date of Startup: <u>December 18, 1988</u>			

(19/77)

8812290246 881215
 PDR ADOCK 05000331
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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
DATE 12-15-88
COMPLETED BY Lonnie Miller
TELEPHONE (319) 851-7204

MONTH November 1988

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
16	<u>0</u>
17	<u>0</u>
18	<u>0</u>
19	<u>0</u>
20	<u>0</u>
21	<u>0</u>
22	<u>0</u>
23	<u>0</u>
24	<u>0</u>
25	<u>0</u>
26	<u>0</u>
27	<u>0</u>
28	<u>0</u>
29	<u>0</u>
30	<u>0</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS
 REPORT MONTH: November 1988

Docket No.: 050-0331
 Unit: Duane Arnold Energy Center
 Date: 12-15-88
 Completed By: Lonnie Miller
 Telephone: (319) 851-7204

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	11-01-88	S	720	C	4	N/A	N/A	N/A	Refueling.

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: 12-15-88
 Completed By: Lonnie Miller
 Telephone: (319) 851-7204

DATE	SYSTEM	COMPONENT	DESCRIPTION
11/13/88	Condensate	"B" Condensate Pump	Completed installation.
11/21/88	Reactor	Reactor Core	Completed core reload.
11/25/88	Residual Heat Removal	"B" Side Pump Motors	Completed installation of "B" and "D" RHR pump motors.
11/28/88	Control Rod Drive	Insert/Withdraw Lines	Identified indications of transgranular stress corrosion cracking in CRD insert/withdraw lines. (LER 88-19 being prepared)
11/29/88	Generator	Isophase Bus Duct Bushings	Completed replacement of three isophase bus duct bushings.

REFUELING INFORMATION

DOCKET NO. 050-0331
DATE 12-15-88
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. March, 1990
3. Scheduled date for restart following refueling.
 - a. December 18, 1988
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? No

NRC has issued all necessary amendments.
5. Scheduled date(s) for submitting proposed licensing action and supporting information.
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. 1998

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

DOCKET NO. 050-0331
DATE 12-15-88
COMPLETED BY Lonnie Miller
TELEPHONE (319) 851-7204

10-01-88 At the beginning of the month the Duane Arnold Energy Center was shutdown for refueling. There were 2 reportable events during the month.

11-06-88 At 1720 hours the plant was shutdown for the Cycle 9/10 refuel outage when a Primary Containment Isolation System (PCIS) half Group III ("B" side) isolation was received. Investigation of the trip revealed that it had occurred due to a trip of the "B" Reactor Protection System (RPS) motor-generator (MG) set.

The cause for the RPS MG set trip was failure of a normally energized relay (General Electric CR120A) in the MG set control circuitry. The cause of the relay failure was its contact retainer. This retainer was of a type susceptible to ignition from the heat produced by the relay. The day before the relay failure the MG set was load tested under various load conditions. It is suspected that additional ambient heat produced under high load conditions may have contributed to the relay failure.

Immediate corrective actions following the trip of the MG set were to switch the "B" RPS bus to alternate power supply and verify automatic function for the Group III isolation. Following verification, the Group III isolation was reset. To repair the MG set, a new relay with a contact retainer which is not susceptible to ignition from relay heat was installed.

This event had no effect on the safe operation of the plant.

LER 88-17

10-18-88 At 1328 hours the plant was shutdown for the Cycle 9/10 refuel outage when a full Reactor Protection System trip and Group I through V isolation signals were received. Investigation determined that the event occurred due to a trip of a "B" Reactor Protection System (RPS) Motor-Generator (MG) set Electrical Protection Assembly (EPA) breaker concurrent with a surveillance test in progress. It is suspected that a spurious signal within the EPA caused the EPA breaker to trip.

Following the EPA breaker trip, the "B" RPS bus was repowered by the alternate power supply. Group V (Reactor Water Cleanup) isolation valves and Secondary Containment isolation dampers isolated as a result of the trip. Various other Primary Containment system valves and breakers were out of service for maintenance at the time of the event and the Control Rod Drives were isolated. Primary Containment was not required at the time of the trip. This event had no effect on the safe operation of the plant, nor would it have an effect on safe operation during any other plant conditions.

LER 88-18

Iowa Electric Light and Power Company

December 15, 1988
DAEC-88-0919

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
November 1988 Monthly Operating Report

Dear Sirs:

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for November, 1988. 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,

 12-15-88
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
Atlanta, GA 30339

Mr. Phillip Ross
U.S. NRC
Maryland Nation 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