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DOCTYPE: LETTER NOTARIZED: NO SUBJECT:

MONTHLY OPERATING REPORT FOR THE MONTH OF JUNE, 1978.

PLANT NAME: DUANE ARNOLD

REVIEWER INITIAL: XRS DISTRIBUTOR INITIAL: 🟎

LTR 1

******************* DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****************

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BR CHIEF ORB#3 BC**W/6 ENCL FOR ACTION:

INTERNAL:

REG FILE *W/ENCL 1 & E**W/2 ENCL HANAUER**W/ENCL AD FOR SYS & PROJ**W/ENCL REACTOR SAFETY BR**W/ENCL EEB**W/ENCL EFFLUENT TREAT SYS**W/ENCL NRC PDR**W/ENCL MIPC**W/2 ENCL DIRECTOR DOR**W/ENCL ENGINEERING BR**W/ENCL PLANT SYSTEMS BR**W/ENCL CORE PERFORMANCE BR**W/ENCL

EXTERNAL: LPDR1S CEDAR RAPIDS, IA**W/ENCL NATL LAB ANL ** W/ENCL TERA**W/ENCL NSIC##W/ENCL ACRS CAT B**W/15 ENCL

DISTRIBUTION: LTR 41 SIZE: 1P+9P

ENCL 41

CONTROL NBR:

782010154

THE END

IOWA ELECTRIC LIGHT AND POWER COMPANY

DUANE ARNOLD ENERGY CENTER P. O. Box 351 Cedar Rapids, Iowa 52406 July 13, 1978 DAEC - 78 - 337

Director, Office of Inspection and Enforcement U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Subject: Monthly Operating Report

File: A-118d

Dear Sirs:

Please find enclosed 10 copies of the Duane Arnold Energy Center Monthly Operating Report for June, 1978. The report has been prepared in accordance with the requirements of Regulatory Guide 1.16 and distribution has been made in accordance with Regulatory Guide 10.1.

Very truly yours, Cllery L. Ha

Eller L. Hammond Chief Engineer Duane Arnold Energy Center

ELH/JVS/nf Encl. cc: D. Arnold S. Tuthill J. Wallace J. Rehnstrom L. Root W. Bryant D. Mineck D. Wilson R. Hannen Dennis Murdock George Toyne B. York

Directorate of Inspection and Enforcement U. S. Nuclear Regulatory Commission Region III 799 Roosevelt Road Glen Ellyn, Illinois 60137 (1)

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Director, Office of Management Information and Program Control U. S. Nuclear Regulatory Commission Washington, D. C. 20555 (2)

782010154

OPERATING DATA REPORT

DOCKET NO.	050-0331
DATE	<u>July 13,</u> 1978
COMPLETED BY	<u>J. Van Si</u> ckel
TELEPHONE	<u>319-851-5</u> 611

OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center	Notes
2. Reporting Period: June	
3. Licensed Thermal Power (MWt):	
4. Nameplate Rating (Gross MWe): <u>565 (Turbine rating)</u>	
5. Design Electrical Rating (Net MWe):538	
6. Maximum Dependable Capacity (Gross MWe): <u>545</u>	
7. Maximum Dependable Capacity (Net MWe): 515	
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Si	ince Last Report, Give Reasons

9. Power Level To Which Restricted, If Any (Net MWe): .

10. Reasons For Restrictions, If Any: _

This Month 	Yrto-Date	Cumulative
720	4 343	
201 0	<u> </u>	29,903
384.9	3,058.8	23,612.8
0	0	0
384.9	2904.3	22,987
0	0	0
343,896	3 716 424	27,821,640
192,400	1,307,325	9, 337,429
181,029	1,227,561	8,716,300
53.5%	66.9%	76.9%
53.5%	66.9%	76.9%
48.8%	54.9%	56.6%
46.7%	52.5%	54.2%
46.5%	13.3%	6.3%
Date, and Duration	n of Fach):	·····
	181,029 53.5% 53.5% 48.8% 46.7% 46.5%	$\begin{array}{c ccccc} \hline 181,029 & 1,227,561 \\ \hline 53.5\% & 66.9\% \\ \hline 53.5\% & 66.9\% \\ \hline 48.8\% & 54.9\% \\ \hline 46.7\% & 52.5\% \\ \hline 46.5\% & 13.3\% \\ \hline \end{array}$

25. If Shut Down At End Of Report Period, Estimated Date of Startup: ____

October 15, 1978

* Turbine Rating: 565.7 MWe

Generator Rating: 663.5 (MVA) x .90 (Power Factor) = 597 MWe

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	050-0331
UNIT	Duane Arnold Energy
DATE	July 13, 1978
COMPLETED BY	J. Van Sickel
TELEPHONE	319-851-5611

MONI	rnJune		
DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	477	17	0 ·
2	484	18	0
3.	447	19	0
4	473	20	0
5	480	21	0
6	477	22	0
7	473	23	0
8	489		0
9	483	25	0
10	454	26	0
11	469	27	0.
12	481	28	0
13	488	20	0
I4	487	30	0
15	462	31	
16	407	31	

INSTRUCTIONS

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

(9/77)

DOCKET NO.

UNIT NAME **COMPLETED BY**

050-0331 Duane Arnold Energy July 13, 1978 Center DATE J. Van Sickel 319-851-561 TELEPHONE

Method of Shutting Down Reactor³ Component Code⁵ Reason² Duration (Hours) System Code⁴ Type^l Licensee Cause & Corrective No. Date Event Action to Report # **Prevent Recurrence** 12 780617 F 335.1 А 3 78-030 CB PIPEXX Plant shutdown due to RPS relay 78-031 RB RELAYX auxiliary switch problems. While shutdown a drywell inspection revealed a through wall crack in a recirculation system inlet nozzle safe end. Plant remained shutdown pending repairs. 7 3 4 F: Forced Reason: Method: Exhibit G - Instructions S: Scheduled A-Equipment Failure (Explain) 1-Manual for Preparation of Data **B**-Maintenance or Test 2-Manual Scram. Entry Sheets for Licensee **C**-Refueling 3-Automatic Scram. Event Report (LER) File (NUREG-**D-Regulatory Restriction** 4-Other (Explain) 0161) E-Operator Training & License Examination F-Administrative 5 G-Operational Error (Explain) Exhibit 1 - Same Source (9/77) H-Other (Explain)

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH.

June

Docket No.	050-0331
Un Duane	Arnold Energy Center
Dal July	13. 1978
Completed by	/J. Van Sickel
Telephone 3	319-851-5611

NARRATIVE SUMMARY OF OPERATING EXPERIENCE

6-1 At the beginning of the report period the plant was operating at 494 MWe with a fuel preconditioning ramp in progress.

The cardox system was taken out of service for approximately one hour for an inspection of the cable spreading room.

- 6-2 Plant was at 514 MWe.
- 6-3 Power was decreased to perform control rod exercises and to perform control rod withdrawals.

A power increase was begun with a fuel preconditioning ramp in progress.

Plant was at 512 MWe at 0635 hours.

6-6 The HPCI turbine was taken out of service to allow lapping of MOV 2202.

A half group 1 isolation came in and TIS 4444 in the main steam tunnel was found indicating 195° F. The most likely cause was a small packing leak. The high temperature cleared after approximately 5 hours.

- 6-7 Small power reductions were necessary due to condenser vacuum problems.
- 6-8 The "B" CRD pump was removed from service due to faulty bearings.
- 6-9 Full out rod position indication on Panel 1C-05 was lost for approximately l_2^1 hours due to a power supply problem.

The meter for APRM "A" gave erratic indication during surveillance testing. The cause was found to be a bad solder connection which was repaired.

During surveillance testing the automatic depressurization system "A" trip system logic timer was found inoperable and was replaced.

R0 78-019

- 6-11 Plant load reductions were necessary due to increasing condenser back pressure.
- 6-12 The HPCI turbine stop valve, HV 2201, was disassembled for maintenance.
- 6-13 The HPCI turbine was tested satisfactory and declared operable.
- 6-14 The plant was at 520 MWe at 0638 hours.
- 6-15 Drywell equipment drain sump CV3728 failed in the closed position. The valve would isolate automatically but had to be manually opened. The cause of this problem was under investigation.
- 6-16 Plant load reductions were necessary due to increases in condenser back pressure. Plant load was reduced to a low of 395 MWe at 2024 hours.
- 6-17 The plant was at 313 MWe at 0004 hours to perform control rod exercises and control valve testing.

Docket No. 050-0331
Un Duane Arnold Energy Center
Date July 13, 1978
Completed by J. Van Sickel
Telephone 319-851-5611

6-17 A reactor scram occurred at 0055 hours during control valve testing. Subsequent investigation revealed the scram had occurred due to seven reactor protection system relay auxiliary switches becoming loose on the relay and resulting in the back up scram valves being energized.

RO 78-031

During a special drywell inspection following the scram a water leak was found in the area of the "B" recirculation system N2A inlet nozzle. Further investigation revealed the leak was the result of a through wall crack in the nozzle safe end approximately 4 to 6 inches in circumferential length. The plant was placed in the cold shutdown condition for repairs.

R0 78-030

Following the scram the suppression pool purge inlet valve, CV 4308, did not close on an isolation signal.

R0 78-033

- 6-17 The "A" and "B" recirculation pumps were secured.
- 6-17. The "A" RHR shutdown cooling system was placed in service.
- 6-18 The "B" RHR shutdown cooling system was placed in service and the "A" system secured.
- 6-18 The reactor cavity shield blocks were removed.
- 6-19 The drywell head was removed.
- 6-19 The reactor vessel head insulation was removed.
- 6-20 The reactor vessel head was detentioned and removal was begun.
- 6-20 The "A" RHR shutdown cooling system was placed in service and the "B" system secured.
- 6-21 The reactor vessel head was removed.
- 6-21 The steam dryer was removed from the reactor vessel.
- 6-21 The moisture separator was removed from the reactor vessel.
- 6-22 During surveillance testing RHR service water pumps "A" and "C" did not produce the required discharge pressure at rated flow.

RO Investigation pending

- 6-23 The reactor cavity was flooded up.
- 6-25 Installation of jet pump plugs was begun.
- 6-26 Draining of the reactor cavity was begun.
- 6-27 During surveillance testing PDS 4304 and PDS 4305 were found to have out of

Docket No. 050-0331
Jn Duane Arnold Energy Center
Date July 13, 1978
Completed by J. Van Sickel
Telephone 319-851-5611

specification setpoints. These switches control reactor building to torus vacuum breakers CV 4304 and CV 4305. The switches were recalibrated.

R0 78-032

6-28 Reactor cavity draining was completed.

6-30 The main generator was purged.

6-30 The impellers were adjusted on the "A" and "C" RHR service water pumps and the pumps tested and determined to meet Technical Specification pressure and flow requirements.

Docket No. 050-0331 Unit Duane Arnold Energy Date July 13, 1978 Completed by J. Van Sickel Telephone 319-851-5611

MAJOR SAFETY RELATED MAINTENANCE

Date	System	Component	Description
6-1-78	HPCI System	TR 4400	Replaced failed input relay
6-5-78	Reactor Vessel Recircula- tion	CV 4601	Inspected power cable splice
6-5-78	Standby Diesel Generators	1G-21 Jacket Coolant Circulating Pump	Replaced thermal overloads
6-6-78	•Containment Atmosphere Control System	AR4381A	Recalibrated
6-6-78	Containment Atmosphere Control System	AR4382A	Recalibrated
6-8-78	Drywell Sump System	SV3728	Burnished switch contacts
6-9-78	Neutron Monitoring System	APRM "A"	Resoldered bad connection
6-9-78	Automatic Depressurization System	ADS Timer "B"	Replaced inoperable timer
6-9-78	HPCI System	MOV 2202	Disassembled, lapped, reassembled and tested valve
6-10-78	RCIC System	CV 2409	Adjusted limit switch
6-13-78	RHR Cooling Water System	RHR SW Strainer 1S-90A	Repaired strainer basket
6-13-78	HPCI System	HV 2201	Disassembled and inspected valve. Reset balance piston throttle screws and tested valve.

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Docket No. 050-0331 Unit Duane Arnold Energy Date July 13, 1978 Completed by J. Van Sickel Telephone 319-851-5611

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MAJOR SAFETY RELATED MAINTENANCE

Date	System	Component	Description
6-14-78	HPCI System	HPCI Turbine Vacuum Pump 1P-233	Installed new motor brushes and cle
6-14-78	Containment Atmosphere Control System	AR 43 82A	Calibrated span
6-19-78	Control Building H & V System	"A" Standby Filter Unit Fan 1V-SF-30A	Repositioned fan on shaft and tightened set screws
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REFUELING INFORMATION

UnitDuane Arnold Energy Center Date July 13, 1978 Completed by J. Van Sickel Telephone <u>319-851-5611</u>

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- 1. Name of facility.
 - A. Duane Arnold Energy Center
- 2. Scheduled date for next refueling shutdown.
 - A. Unknown. Under review due to present extended outage.
- 3. Scheduled date for restart following refueling.
 - A. Unknown. Under review due to present extended outage.
- 4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?
 - A. Yes. MCPR and MAPLHGR operating limits as derived from transient and accident analyses.
- 5. Scheduled date(s) for submitting proposed licensing action and supporting information.
 - A. January, 1979
- 6. Important licensing considerations associated with refueling, c.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures.

A. The reload will consist of up to 100 8 x 8 2 water rod bundles.

- 7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.
 - A. a) 368 in core b) 276
- 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. a) 480 b) 2050

- 9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.
 - **A.** 1980