

OPERATING DATA REPORT

DOCKET NO. 050-0331
 DATE August 14, 1979
 COMPLETED BY J. Van Stichel
 TELEPHONE 319-851-5611

OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center
 2. Reporting Period: July, 1979
 3. Licensed Thermal Power (MWt): 1658
 * 4. Nameplate Rating (Gross MWe): 565 (Turbine Rating)
 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 Last Report. Give Reasons:

Notes

9. Power Level To Which Restricted, If Any (Net MWe): 510
 10. Reasons For Restrictions, If Any: Thermal power limited to approximately 95% due to MCPR Restrictions as of July 21, 1979.

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	5,087	39,407
12. Number Of Hours Reactor Was Critical	664.1	3,364.3	26,977.1
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	657.1	3,268.3	26,252.3
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	903,792	4,397,160	32,458,800
17. Gross Electrical Energy Generated (MWH)	315,079	1,545,630	10,883,059
18. Net Electrical Energy Generated (MWH)	296,333	1,454,310	10,170,610
19. Unit Service Factor	88.3%	64.2%	66.6%
20. Unit Availability Factor	88.3%	64.2%	66.6%
21. Unit Capacity Factor (Using MDC Net)	77.3%	55.5%	50.1%
22. Unit Capacity Factor (Using DER Net)	74.0%	53.1%	48.0%
23. Unit Forced Outage Rate	11.7%	35.8%	22.9%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

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

* Turbine Rating: 565.7 MWE
 Generator Rating: 663.5 (MVA) x .90 (Power Factor) = 597 MWE

(9/77)
 7908210516

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 050-0331
 UNIT Duane Arnold Energy Center
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MONTH July, 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	333	17	527
2	482	18	167
3	497	19	0
4	489	20	0
5	523	21	0
6	511	22	243
7	423	23	353
8	478	24	429
9	512	25	430
10	507	26	410
11	510	27	449
12	510	28	385
13	513	29	427
14	377	30	458
15	485	31	469
16	526		

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.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 050-0331
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 DATE August 14, 1979
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 TELEPHONE 319-851-5611

REPORT MONTH July, 1979

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
7.	790714	S	0	B	4				Power reduction to check calibration of feedwater flow instrumentation.
8.	790718	F	86.9	H	3				Reactor scrambled on turbine trip due to exhaust hood high temperature indication.

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-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

REFUELING INFORMATION

Date August 14, 1979
Completed by J. Van Sickle
Telephone 319-851-5611

1. Name of facility.
A. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown.
A. February 9, 1980
3. Scheduled date for restart following refueling.
A. May 3, 1980
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. Unknown.
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.
A. The reload will consist of up to 92 8x8 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 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. 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

- 7-1 At the beginning of the report period the plant was decreasing power in order to perform a control rod sequence exchange. The sequence exchange was completed at 0245 hours and a load increase begun at 1055 hours.
- 7-2 At 2227 hours the plant was at 539 MWe.
- 7-3 A special testing program indicated a potential generic problem existed with concrete anchor bolts not meeting seismic design criteria. An analysis by the architect engineer concluded the failure rate was sufficiently low so as to not compromise ECCS operability in the event of a design basis earthquake.

RO 79-014

- 7-3 Power was decreased to perform control rod withdrawals.
- 7-4 Control rod withdrawals were completed and a power increase began. At 2215 hours the plant was at 560 MWe.
- 7-6 During an annual review of the surveillance program it was determined the requirement on Tech Spec page 3.2-15, note 6, to measure relay dropout voltage had not been incorporated into the surveillance test which tests the HPCI, RCIC, LPCI, ADS and Core Spray trip system bus power monitor relays. The surveillance test in question did provide for a functional test of the relays which verified operability. ECCS operability not effected.

RO 79-015

- 7-7 Power was reduced to perform control rod withdrawals. A power increase was begun at 1603 hours.
- 7-14 Power was decreased to check the feedwater flow instrumentation calibration. A power increase was begun at 0926 hours.
- 7-16 The plant was at 561 MWe at 0620 hours.
- 7-18 The reactor scrammed at 0804 hours due to a turbine trip caused by a exhaust hood high temperature indication. The decision was made to leave the plant shutdown to perform maintenance.

RO 79-015 Con't.

- 7-19 At 0235 Hours the plant was in cold shutdown.
- 7-20 Startup surveillance testing was begun at 1555 hours. Plant startup was begun at 2058 hours.
- 7-21 The reactor was critical at 0112 hours. The reactor was subcritical for a drywell inspection which was conducted at 1001 hours. The reactor was again critical at 1601 hours and plant startup continued. The main generator was placed on the line at 2256 hours.
- 7-22 Reactor power was increased with control rod withdrawals.
- 7-23 Reactor power was increased with recirc. flow.
- 7-23 During surveillance testing, rod block monitor "B" was determined to be inoperable.

RO Report Pending

- 7-24 The plant was at 467 MWe.
- 7-25 During normal operation it was determined that plant heat rates and efficiencies were better than normally expected. An investigation was begun which centered on feedwater flow instrumentation. Following a plant outage on July 21, 1979, during which F/W flow instrument manifold valves were repaired, heat rates and efficiencies were close to expected values. It has since been calculated that the licensed thermal power limit was exceeded. It can also be concluded MAPLHGR, LHGR and MCPR limits were exceeded.

RO 76-016

- 7-25 Power was reduced to perform control rod withdrawals. The rod withdrawals were completed at 2230 hours and a power increase began.
- 7-26 During surveillance testing suppression chamber vacuum breaker instrumentation was found to have out of specification setpoints.

RO Report Pending

- 7-27 The plant was at 490 MWe at 1438 hours. A power decrease was begun at 2222 hours to perform control rod withdrawals.
- 7-28 Target rod pattern was reached at 0157 hours and a power increase on recirc. flow began at 0245 hours.

RO Report Pending Con't.

7-28 At 70% power an operating limit MCPR violation occurred.

RO Report Pending

7-31 The plant was at 502 MWe at 2257 hours.

Docket No. Q50-0331
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MAJOR SAFETY RELATED MAINTENANCE

DATE	SYSTEM	COMPONENT	DESCRIPTION
7-5-79	Primary Containment H & V	SV-8115A	Replaced Coil
7-17-79	RHR Service Water	1S-90A,1S-90B	Cleaned Strainers
7-19-79	RHR Service Water	1S-90A,1S-90B	Cleaned Strainers
7-19-79	ESW	1S-89A,1S-89B	Cleaned Strainers
7-20-79	Containment Atmospheric Control	RE-8102A	Replaced Gaseous Detector Tube
7-20-79	RHR Service Water	1S-90B	Cleaned Strainer
7-20-79	ESW	1S-89B	Cleaned Strainer
7-21-79	RCIC	EBB-1S-H-5	Repositioned Hanger
7-21-79	Main Steam Isolation	CV-4415, CV-4416, CV-4418, CV-4420, CV-4421	Repacked Valves
7-24-79	Primary Containment	LR-4385B	Repaired Power Supply
7-25-79	RHR Service Water	1S-90B	Cleaned Strainer
7-25-79	ESW	1S-89B	Cleaned Strainer
7-26-79	HPCI	MOV-2315	Replaced Key in Valve Stem Stop