

February 15, 2002

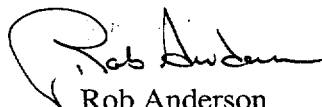
NG-02-0121

U.S. Nuclear Regulatory Commission
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Subject: Duane Arnold Energy Center
Docket No: 50-331
Operating License: DPR-49
January 2002 Monthly Operating Report
File: A-118d

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for January 2002. The report has been prepared in accordance with the guidelines of NRC Generic Letter 97-02: Revised Contents Of The Monthly Operating Report, and distribution has been made in accordance with DAEC Technical Specifications, Section 5.6.4.

Very truly yours,



Rob Anderson
Plant Manager-Nuclear

RA/RBW

Enclosures

IE24

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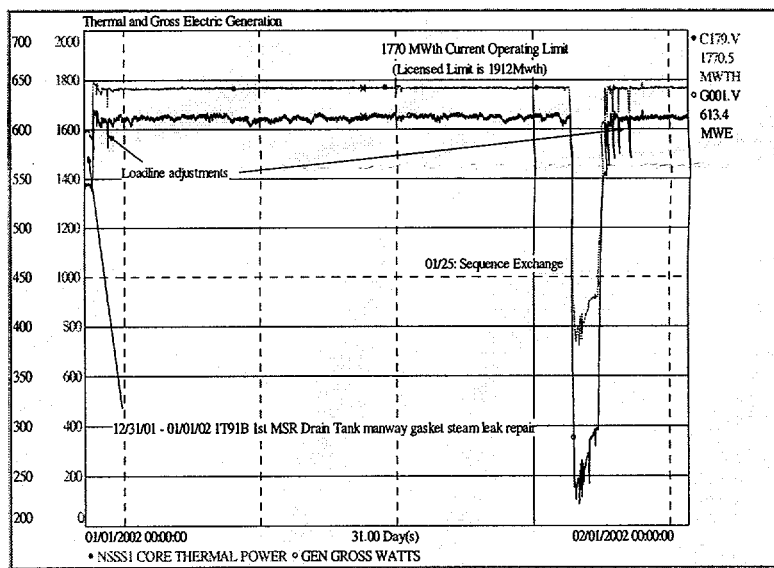
CTS Project - LILC.

OPERATING DATA REPORT

DOCKET NO: 50-331
 DATE: 02-15-2002
 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: January 2002
3. Licensed Thermal Power (MW_{th}): 1912
Tech. Spec. Amendment 243 and TSCR for extended power uprate was implemented November 7, 2001. Current operating thermal power, as limited by balance-of-plant equipment is ~~1790~~ 1770.
4. Nameplate Rating (Gross MW_e DER): 676.425
Current rated output, adjusted for as-built balance-of-plant conditions is ~~614.0~~ 607.0
5. Design Electrical Rating (Net MW_e DER): ~~581.4~~ 574.4
6. Maximum Dependable Capacity (Gross MW_e MDC): ~~593.1~~ 586.1
7. Maximum Dependable Capacity (Net MW_e MDC): ~~565.5~~ 558.5
8. If Changes Occur in Capacity Ratings (Items Number 3 through 7) since the last report, give reasons: On January 1st administrative limited thermal power was reduced from 1790 to 1770 MW_{th} due to design limitations on the feedwater flow regulating valves. The 20 MW_{th} thermal power decrease resulted in reducing output ratings by 7 MW_e .
9. Power Level to Which Restricted, If Any (Net MW_e): N/A
10. Reasons for Restrictions, If Any: N/A



	Jan-02	2002	Cumulative
11. Hours in Reporting Period	744.0	744.0	236,688.0
12. Number of Hours Reactor Was Critical	744.0	744.0	186,724.6
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	744.0	744.0	182,668.9
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,280,153.5	1,280,153.5	265,778,783.3
17. Gross Electrical Energy Generated (MWH)	442,902.0	442,902.0	89,177,119.6
18. Net Electrical Energy Generated (MWH)	419,086.1	419,086.1	83,794,712.1
19. Unit Service Factor	100.0%	100.0%	77.2%
20. Unit Availability Factor	100.0%	100.0%	77.2%
21. Unit Capacity Factor (Using MDC Net)	100.9%	100.9%	69.6%
22. Unit Capacity Factor (Using DER Net)	98.2%	98.1%	66.8%
23. Unit Forced Outage Rate	0.0%	0.0%	8.5%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): N/A
25. If Shutdown at End of Report Period, Estimated Date of Startup: N/A

AVERAGE DAILY UNIT POWER LEVEL

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MONTH January 2002

Day	Average Daily Power Level (MWe-Net)
1	552.9
2	577.9
3	579.6
4	580.3
5	580.0
6	581.5
7	583.2
8	575.9
9	581.5
10	577.8
11	580.0
12	579.3
13	580.1
14	579.4
15	580.0
16	581.7
17	581.1
18	582.8
19	579.8
20	582.2
21	581.5
22	579.0
23	580.9
24	581.6
25	576.0
26	249.5
27	417.6
28	554.6
29	584.1
30	577.3
31	579.7

REFUELING INFORMATION

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1. Name of facility. Duane Arnold Energy Center
2. Scheduled date for next refueling shutdown. Spring 2003
3. Scheduled date for restart following refueling. Spring 2003
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? No
5. Scheduled date(s) for submitting proposed licensing action and supporting information. N/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. N/A
7. Current fuel assemblies inventory

	Number of Fuel Assemblies	Projected date of last refueling that can be discharged (after allowing margin for maintenance of continuous full-core discharge capability)
Installed into reactor core	368	
Discharged from core to Spent Fuel Storage Pool	1912	
Installed capacity of Spent Fuel Storage Pool	2411	2001
Licensed capacity of Spent Fuel Storage Pool (with reracking)	2829	2007
Licensed capacity of Spent Fuel Storage Pool and Cask Pool (with reracking)	3152	2011

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UNIT SHUTDOWNS AND POWER REDUCTIONS REPORT MONTH: January 2002							
No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause
1	01/25/02	S	0 (20.2 full-power- hours- equivalent)	B	5	N/a	Sequence Exchange

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)
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Monthly Operational Overview for January 2002

At 00:53 on December 31st, operators had reduced power to 955 MWth, 293 MWe to perform a steam leak repair on the 1T-91 'B' 1st Stage Moisture Separator Reheater drain tank manway gasket. Following completion of the repair of the valve, reactor thermal power was increased to 1790 MWth at 11:19 on January 1st.

At 15:37 January 1st power was reduced to 1745 MWth by lowering Reactor Recirculation System (RRS) flow to withdraw control rods to adjust loadline. Power was increased to 1790 MWth at 16:01.

At 17:29 January 1st, shortly after the power increase, the 'B' Feed Regulating Valve (FRV) exhibited position oscillations, and reactor power was lowered to approximately 1770 MWth to stabilize reactor feed flow. Subsequently, pending resolution of design issues with the FRVs, the administrative limit on thermal power was reduced from 1790 to 1770 MWth, and corresponding rated electric output was reduced from 614 to 607 MWe.

At 04:52 on January 2nd reactor power was reduced to 1700 MWth by lowering RRS flow to withdraw control rods to adjust loadline. Power was increased to 1770 MWth at 17:39.

On January 17th at 00:37, power was reduced approximately 2 MWe for approximately seven hours to calibrate FT1581 and FT1626, 'A' and 'B' Feedwater flow transmitters.

The DAEC continued operating at its 1770 MWth administrative thermal power limit until January 25th at 16:33 when, during switching of its electrical supply, the 'B' RRS Motor-Generator (MG) set scoop tube ran back 1.8% and automatically locked up. The runback lowered reactor power by 10 MWth. Following the reduction in power, the RRS pump mismatch was verified, and the RRS MG Scoop Tube Lock was reset. Core thermal power, recirculation pump speed, and core flow were observed to be stable. At 17:40, thermal power was returned to 1770 MWth.

At 22:31 January 25th, Reactor power was lowered in order to allow performance of a control rod sequence exchange, along with removal of the 'B' Condensate and Feedwater Pumps from service to allow troubleshooting and maintenance to be performed on the 'B' FRV and minimum flow valve. Return to full power was achieved at 18:00 on January 27th.

Following the sequence exchange, power was briefly lowered by reducing RRS flow four times (20:07 on January 27th, and 03:07, 10:13, and 23:34 on January 28th) to change control rod positions to adjust loadline.

At 15:34 on January 29th, power was increased to 1790 MWth. The 'B' FRV was observed oscillating, and power was reduced to 1770 at 16:30.

Allocation of Production & Losses:	Electrical Output MWe	Capacity Factor % of 607* MWe (Target Output)	Full Power Equivalent Hours (FPHeq)
Net Electric Output	563.30	92.80%	690.42
Plant House Loads (while on-line)	+31.99	+5.27%	39.24
Gross Electric Generation	595.28	98.07%	729.66
Capacity Losses (departures from full thermal power):			
Loadline Adjustments: 01/01 & 01/02	0.02	0.00%	0.02
Feedwater Flow Calibration 01/17	0.01	0.00%	0.01
Sequence Exchange and related follow-on rod-pulls 1/25 - 28	16.46	2.71%	20.18
MSR Steam Leak Repair 12/31 00:53 - 01/01 16:01	0.99	0.16%	1.21
Maintain Margin to 1770 Administrative MWth Limit	0.12	0.02%	0.15
Efficiency Losses (occur even at full thermal power):			
Unidentified (residual)	0.13	0.03%	0.16
-/+ Seasonal Effects (negative losses, i.e., cold weather increases)	(6.01)	(0.99%)	(7.39)
Total On-line Losses (Capacity, Efficiency, and Weather):	11.72	1.93%	14.34
Off-Line Losses: (none)	0.00	0.00%	0.00
Target Electric Output, Total %, Total # of clock-hours	607.00	100.00%	744.00

Licensing Action Summary:

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