

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-346
 UNIT Davis-Besse Unit 1
 DATE January 8, 1980
 COMPLETED BY Erdal Caba
 TELEPHONE 419-259-5000, Ext. 236

MONTH December, 1979

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	0	24	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	0
16	0		

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.

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OPERATING DATA REPORT

DOCKET NO. 50-346
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OPERATING STATUS

1. Unit Name: Davis-Besse Unit 1
 2. Reporting Period: December, 1979
 3. Licensed Thermal Power (MWt): 2772
 4. Nameplate Rating (Gross MWe): 925
 5. Design Electrical Rating (Net MWe): 906
 6. Maximum Dependable Capacity (Gross MWe): to be determined
 7. Maximum Dependable Capacity (Net MWe): to be determined
 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): None
 10. Reasons For Restrictions, If Any:

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	8,760	20,525
12. Number Of Hours Reactor Was Critical	29.1	4,332.4	10,964.2
13. Reactor Reserve Shutdown Hours	0	2,085.5	2,875.8
14. Hours Generator On-Line	0	4,141.6	9,874.8
15. Unit Reserve Shutdown Hours	0	1,728.2	1,728.2
16. Gross Thermal Energy Generated (MWH)	806	10,011,937	20,199,507
17. Gross Electrical Energy Generated (MWH)	0	3,339,756	6,723,511
18. Net Electrical Energy Generated (MWH)	0	3,129,118	6,170,578
19. Unit Service Factor	0	47.3	49.5
20. Unit Availability Factor	0	67.0	58.8
21. Unit Capacity Factor (Using MDC Net)	to be determined		
22. Unit Capacity Factor (Using DER Net)	0	39.4	36.2
23. Unit Forced Outage Rate	100	28.5	27.6

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
Refueling Outage, March 1980 12 weeks

25. If Shut Down At End Of Report Period, Estimated Date of Startup: January 5, 1980

26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	_____	_____
INITIAL ELECTRICITY	_____	_____
COMMERCIAL OPERATION	_____	_____

OPERATIONAL SUMMARY
DECEMBER, 1979

The unit shutdown which was initiated on November 30, 1979 to investigate the motor lower bearing oil level alarm on Reactor Coolant Pump (RCP) 1-2; to fix Group 7 Rod 5 and Group 5 Rod 11 APIs was still in progress throughout the month of December. The following is a list of the major work items performed during the outage:

1. The RCP 1-2 motor lower bearings oil leak was thoroughly investigated. No concrete reason for the low level was found. It was possibly due to filling the motor when it was running which caused a syphon effect.
2. Group 7 Rod 5 and Group 5 Rod 11 APIs were fixed.
3. Shortly after the shutdown, RTD RC3A3 failed, and it was thought that there was a primary leak through the RTD. It was later determined that the leakage was through the furmanited gasket and into the thermocouple extension piece. The furmanite box had come into contact with a Reactor Coolant System (RCS) piping whip restraint bending the RTD boss and RTD, cracking the extension piece. This in turn allowed water to leak into the RTD head and short out the signal. Subsequently, it was found that the two furmanited RTDs on Loop 2 were both damaged by the furmanite boxes contacting whip restraints. On Loop 1 there was a slight dent in the bosses due to the whip restraints contacting the pipe. Three of the bosses were replaced and new well type RTDs were also installed. The repairs to the bosses were completed on December 26, 1979.
4. Due to the extended outage several eighteen month surveillance tests were completed.

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UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December, 1979

DOCKET NO. 50-346
 UNIT NAME Davis-Besse Unit 1
 DATE January 8, 1980
 COMPLETED BY Erdal Caba
 TELEPHONE 419-259-5000, Ext. 236

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
20	79 11 30 (Continued)	S F	11.4 732.6	B	1	NA	NA	NA	Maintenance outage due to a low bearing oil level alarm on Reactor Coolant Pump 1-2. See Operational Summary for further details.

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¹ F: Forced
S: Scheduled

² Reason:
A-Equipment Failure (Explain)
B-Maintenance of 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: December, 1979

1. Name of facility: Davis-Besse Nuclear Power Station Unit 1
2. Scheduled date for next refueling shutdown: March, 1980
3. Scheduled date for restart following refueling: June, 1980

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? If answer is yes, what, in general, will these be? If answer is no, has the reload fuel design and core configuration been reviewed by your Plant Safety Review Committee to determine whether any unreviewed safety questions are associated with the core reload (Ref. 10 CFR Section 50.59)?

Yes, see attached

5. Scheduled date(s) for submitting proposed licensing action and supporting information. December, 1979

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.

The spent fuel pool capacity expansion program was approved by the NRC in Amendment 19 to the operating license received August 1, 1979.

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool.

(a) 177 (b) 0 (zero)

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.

Present 735 Increase size by 0 (zero)

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

Date 1989 (assuming ability to unload the entire core into the spent fuel pool is maintained and the unit goes to an 18 month refueling cycle)

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REFUELING INFORMATION Continued

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December, 1979

4. The following Technical Specifications (Part A) will require revision:

- 2.1.1 & 2.1.2 - Reactor Core Safety Limits (and Bases)
- 2.2.1 - Reactor Protection System Instrumentation Setpoints
(and Bases)
- 3.1.3.6 - Regulating Rod Insertion Limits
- 3.1.3.7 - Rod Program
- 3.2.1 - Axial Power Imbalance (and Bases)

The following Technical Specifications (Part A) may also require revision:

- 3.1.2.8 & 3.1.2.9 - Borated Water Sources (and Bases)
- 3.2.4 - Quadrant Power Tilt (and Bases)
- 3.2.5 - DNB Parameters (and Bases)

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COMPLETED FACILITY CHANGE REQUESTS

FCR NO: 79-378 (including Supplements 1 through 4)

SYSTEM: Various Class 1E Systems

COMPONENT: 125 VDC Control Relays

CHANGE, TEST, OR EXPERIMENT: On November 19, 1979, the installation and testing associated with the implementation of FCR 79-378 and its four supplements was completed. As requested by the FCR, arc suppression diodes were installed in various safety related and non-safety related circuits where the contacts of Couch relays are controlling highly inductive loads (generally the coils of other relays). A total of 26 safety related circuits was involved including 4 control relays in the auxiliary feedwater pump controls, 18 in switchgear controls, and 4 in emergency diesel generator controls.

REASON FOR THE FCR: It was found that failures of Couch relays which occurred in the reactor coolant pump interlock circuitry (see Licensee Event Report NP-33-79-126) had been caused by the high transient voltage which occurs when the Couch relay contacts interrupt the current flow through a highly inductive load. The high voltage arcs across the contacts of the Couch relays resulting in a short circuit. The diodes added under this FCR preclude this from occurring by shunting out the transient voltages through a path separate of the relay contacts.

SAFETY EVALUATION: This change will not adversely affect the function of the relays. It will improve the reliability of the circuits by providing a path for the discharge of the energy in the coil through the diode, rather than through the contacts of the interrupting relay. This is not an unreviewed safety question.

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COMPLETED FACILITY CHANGE REQUESTS

FCR NO: 79-405

SYSTEM: Reactor Protection System (RPS)

COMPONENT: Power Range Nuclear Instrument (NI) 5

CHANGE, TEST, OR EXPERIMENT: On November 15, 1979, the physical work and testing associated with the implementation of FCR 79-405 was completed. This FCR moved cables 2LRPSA01C and 2LRPSA01X, which are the leads for the bottom ion chamber signals of NI-5, from penetration cable GW3 to penetration cable DW3 both located in penetration P2L4EX/P2L4GI.

REASON FOR THE FCR: During the performance of IC 2002.03, NI Detector Post Installation Test, it was found that the inner and outer shields on penetration cable GW3 were shorted together.

SAFETY EXPLANATION: The change outlined was reviewed on Bechtel Drawing E-530 and determined to have no adverse impact on safety. The change of modules within penetration P2L4G will utilize a spare which was provided for this purpose. This is not an unreviewed safety question.

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OPERATIONAL SUMMARY
NOVEMBER, 1979

The unit shutdown which was initiated on October 25, 1979, when Reactor Coolant Pump (RCP) 2-2 tripped from a blown fuse, continued until 1811 hours on November 20, 1979, when the turbine-generator was synchronized. Below is a list of the major work items performed during the outage:

1. All four RCP seals were replaced.
2. A new expansion joint for 1-4-2 heater extraction was rewelded.
3. A design change to the Couch relays in the RCP starting interlock circuits was made. This initiated a similar change in sixteen safety related circuits.
4. NI-3 was pulled and a new detector was installed. A new section of cable between the containment penetration and the Ni-1 pre-amp was installed.
5. Several pipe restraints were modified as a result of IE Bulletin 79-14 findings.

11/20/79 - 11/21/79 The unit returned on line at 1811 hours on November 20, 1979, and reactor power was increased to 81% of full power with generator gross load at 760 MWe on November 21, 1979.

11/22/79 Reactor Coolant System (RCS) flow indication was determined to be less than required by Technical Specification 3.2.5 at 0300 hours. Reactor power was decreased to 73% at which point RCS flow indication was back within allowable limits. At 0400 hours generator gross load was 684 MWe.

11/23/79 - 11/25/79 Reactor power was maintained at approximately 73% until 0620 hours on November 25, 1979, when RCS flow indication was again determined to be less than that required by Technical Specifications. Reactor power was decreased to 67% at which point the RCS flow indication was again back within tolerance. The cause of the low flow indication is still being investigated.

11/26/79 Reactor power was maintained at approximately 69% of full power. At 2145 hours on November 26, 1979, RCP 1-2 was manually tripped due to a lower motor bearing low oil level alarm.

11/27/79 - 11/28/79 The unit remained at approximately 68% of full power with generator gross load of 635 MWe until 0645 hours on November 28, 1979, when it was determined that the power range nuclear instrumentation (NIs) were reading slightly greater than 2% below the calculated heat balance. Reactor power was reduced to 50% to bring the NIs in tolerance and to run another heat balance to get the NIs in tolerance.

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OPERATIONAL SUMMARY
NOVEMBER, 1979
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11/29/79

Group 7, Rod 5 was declared inoperable at 0640 hours initiating a reduction in reactor power to approximately 42% and resetting the high flux trip setpoint to 54%.

11/30/79

Reactor power was reduced and the turbine-generator taken off line at 1910 hours to investigate the lower motor bearing oil level alarm on RCP 1-2; to fix Group 7, Rod 5 and Group 5, Rod 11 API.

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