UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-346
UNIT NAME Davis-Besse Unit 1
DATE November 9, 1979
COMPLETED BY Erdal Caba
TELEPHONE 419-259-5000, Ext. 236

REPORT MONTH October, 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
15	79 10 5	S	48.8	A	1	NA	CJ	VALVEX	Shutdown to repair pressurizer spray valve RC 2.
16	79 10 15	F	142.2	A	3	NP-32-79-11	HA	INSTRU	Capacitor failure in Integrated Control System (ICS) pulser circuit to the turbine electro-hydraulic control system. Refer to attached summary for further details.
17	79 10 25	F	156.4	A	3	NP-33-79-121	CB	CKTBRK	Loss of Reactor Coolant Pump 2-2 from blown fuse in the DC power supply starting a pump two minute time delay trip relay with Reactor Coolant Pump 1-1 already shutdown.

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

(9/77)

POOR ORIGINAL

7912130 375

1551 347

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-346

UNIT Davis-Besse Unit 1

DATE December 7, 1979

COMPLETED BY Erdal Caba

TELEPHONE 419-259-5000, Ext. 236

MONTH November, 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	555
6	0	22	660
7	0	23	636
8	0	24	649
9	0	25	609
10	0	26	595
11	0	27	605
12	0	28	443
13	0	29	332
14	0	30	209
15	0	31	---
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.

(9/77)

1551 348

OPERATING DATA REPORT

DOCKET NO. 50-346
DATE December 7, 1979
COMPLETED BY Erdal Caba
TELEPHONE 419-259-5000, Ext. 236

OPERATING STATUS

1. Unit Name: Davis-Besse Unit 1
2. Reporting Period: November, 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	720	8,016	19,781
12. Number Of Hours Reactor Was Critical	259.8	4,303.3	10,935.1
13. Reactor Reserve Shutdown Hours	0	2,085.5	2,875.8
14. Hours Generator On-Line	241.0	4,141.6	9,874.8
15. Unit Reserve Shutdown Hours	0	1,728.2	1,728.2
16. Gross Thermal Energy Generated (MWH)	409,367	10,011,131	20,198,701
17. Gross Electrical Energy Generated (MWH)	137,678	3,339,756	6,723,511
18. Net Electrical Energy Generated (MWH)	121,083	3,129,118	6,170,578
19. Unit Service Factor	33.5	51.7	51.5
20. Unit Availability Factor	33.5	73.2	61.3
21. Unit Capacity Factor (Using MDC Net)	to be determined		
22. Unit Capacity Factor (Using DER Net)	18.6	43.1	37.7
23. Unit Forced Outage Rate	66.3	18.1	23.2

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: December 11, 1979
26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY		
COMMERCIAL OPERATION		

(9/77)

1551 349

REFUELING INFORMATION

DATE: November, 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)

1551 350

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH November, 1979

DOCKET NO. 50-346
UNIT NAME Davis-Besse Unit 1
DATE December 7, 1979
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
17	79-10-25 (Continued)	F	474.2	A	3	NP-33-79-121	CB	CKTBRK	Loss of Reactor Coolant Pump (RCP) 2-2 from blown fuse in DC power supply. Replaced all four RCP seals. See Operational Summary for details of further work items completed during the outage.
18	79-11-28	F	0.0	A	4	NA	NA	NA	Reactor power was reduced to approximately 50% to run another heat balance to get the NIs in tolerance when the power range NIs were reading slightly greater than 2% below the calculated heat balance.
19	79-11-29	F	0.0	A	4	NA	NA	NA	Absolute Position Indication (API) for Group 7, Rod 5 with API Group 5, Rod 11 previously declared inoperable was declared inoperable initiating a reduction in reactor power to ~42%.

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

(9/77)

1551 351

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-346
UNIT NAME Davis-Besse Unit 1
DATE December 7, 1979
COMPLETED BY Erdal Caba
TELEPHONE 419-259-5000, Ext. 236

REPORT MONTH November, 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
20	79-11-30	S	4.8	B	1	NA	NA	NA	Maintenance outage due to a low bearing oil level alarm on RCP 1-2. See Operational Summary for further details.

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

(9/77)

1551 352

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. New pre-amp temperature cable was installed for NI-1.
5. Several pipe restraints were modified per IE Bulletin 79-14.

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 inidcation 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.

11/29/79	The Absolute Position Indication (API) for Group 7, Rod 5 was declared inoperable at 0640 hours with Group 5, Rod 11 API previously declared inoperable, initiating a reduction in reactor power to approximately 42% and resetting the high flux trip sepoint 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.

1551 354

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 Sepcifications (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)

1551 355

FACILITY CHANGE REQUEST COMPLETED DURING NOVEMBER, 1979

FCR NO: 77-094

SYSTEM: Post Accident Containment Airborne Radiation Monitors RE 5029 and RE 5030

COMPONENT: Pump interlocks

CHANGE, TEST, OR EXPERIMENT: On June 11, 1979, installation and testing of a low flow trip interlock on both post accident containment airborne radiation monitors RE 5029 and RE 5030 was completed as requested by FCR 77-094. This interlock trips the sample pump of the radiation monitor should a low flow condition exist. This change was made with the recommendation of the unit architect/engineer, Bechtel Company.

REASON FOR THE FCR: The sample inlet and outlet valves for RE 5029 and RE 5030 as well as the containment hydrogen analyzers are in fact containment isolation valves. Upon receipt of a Safety Features Actuation System actuation, these valves would close depriving the sample pumps of suction as well as deadheading them. The interlock which was added trips the sample pumps of the radiation monitors, thus preventing pump damage.

Review of the sample pumps of the hydrogen analyzers revealed that those pumps are in fact vacuum pumps which are capable of being operated with the valves closed without damage. Therefore, no modification was deemed necessary on this system.

SAFETY EVALUATION: The proposed modification would provide radiation monitors RE 5029 and RE 5030 with low flow interlocks to stop the sample pumps in such cases as closure of the inlet valves. The addition of the circuitry necessary to accomplish this does not affect the proper functioning of the radiation monitoring system during its required use as post accident instrumentation.

The modification serves to enhance the probability that the equipment will be available to perform its intended function.

1551 356

FACILITY CHANGE REQUEST COMPLETED DURING NOVEMBER, 1979

FCR NO: 79-246

SYSTEM: Auxiliary Feedwater System

COMPONENT: Mode selector switches HIS520B and HIS521B

CHANGE, TEST, OR EXPERIMENT: On June 23, 1979, installation of mechanical interlocks (stops) on the mode selector switches HIS520B and HIS521B as requested by FCR 79-246 was completed. These switches, located on control room center console, select the control mode of the Auxiliary Feedwater Pump Turbines. The mechanical stops which were added prevent movement of the switches into the Integrated Control System control mode.

REASON FOR THE FCR: The stops were added to comply with the Nuclear Regulatory Commission order dated May 16, 1979, Item IV(1)(b).

SAFETY EVALUATION: The addition of this mechanical interlock will only prevent Integrated Control System control of the Auxiliary Feedwater System. The manual and auto-essential (both safety grade) control functions will not be changed in any way. Therefore, the safety function of the Auxiliary Feedwater System will not be affected. This is not an unreviewed safety question.

1551 357

FACILITY CHANGE REQUEST COMPLETED DURING NOVEMBER, 1979

FCR NO: 78-074

SYSTEM: Service Water

COMPONENT: Flow Elements (FE) 9808 and 9809

CHANGE, TEST, OR EXPERIMENT: On October 4, 1979 the physical work and inspections associated with the installation of 1/2" pipe nipples with threaded pipe caps on the source valves of FE 9808 and FE 9809 were completed. FE 9808 and FE 9809 are the service water flow elements in the outlets of control room emergency condensing units 1-1 and 1-2, respectively.

REASON FOR THE FCR: The threaded nipples were added in order to provide a means of attaching a local differential pressure gauge to the flow elements for calibration purposes.

SAFETY EVALUATION: The change involves only the addition of threaded nipples to the source valves of the Q-listed flow elements FE 9808 and FE 9809. The addition of the nipples will not affect the operation of the flow element. An unreviewed safety question does not exist.

1551 358

FACILITY CHANGE REQUEST COMPLETED DURING NOVEMBER, 1979

FCR NO: 78-503

SYSTEM: Radiation Monitoring

COMPONENT: Radiation Monitor RE 8432

CHANGE, TEST, OR EXPERIMENT: On October 20, 1979 modifications to the discharge piping of radiation monitor RE 8432 were completed as requested by FCR 78-503. RE 8432 monitors the service water discharge header to provide an input to an alarm only; it does not control any equipment. The specific change was to re-route the monitor discharge to a floor drain via a globe valve rather than back into the service water piping.

REASON FOR THE FCR: With the former arrangement insufficient, differential pressure occurred across the radiation monitor during some modes of service water system operation. This resulted in the inability to maintain the correct sample flowrate at all times.

SAFETY EVALUATION: The work involves rework of 3/4" - HBC - 36, an existing equipment drain. The addition of the 3/4" globe valve (SW 8432G) in the non-Q, non-seismic portion of this line to the equipment drain will not adversely affect the operation of RE 8432. The line is non-essential and not required for safe shutdown. This is not an unreviewed safety question. RE 8432 is included in the Environmental Technical Specifications, License Appendix B.

1551 359