



**Commonwealth Edison**

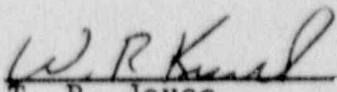
Zion Generating Station  
101 Shiloh Blvd.  
Zion, Illinois 60099  
Telephone 312/746-2084

February 9, 1990

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Dear Sir:

Enclosed please find the Operating Status Report for  
the month of January, 1990 for Zion Generating Station.

*for*   
\_\_\_\_\_  
T. P. Joyce  
Station Manager  
Zion Station

TPJ/JT/vld

Enclosure

cc: T. Maiman  
A. B. Davis (NRC)  
J. Leider  
M. S. Turbak  
W. Naughton  
T. J. Kovach  
D. R. Eggett  
INPO  
Div. of Eng. Health  
State of Illinois  
Tech Staff File  
Director, Office of Inspection  
and Enforcement  
Master File

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## OPERATING DATA REPORT

**DOCKET NO.** 50-295  
**DATE** 2/1/90  
**COMPLETED BY** J. Thomas  
**TELEPHONE** (708) 746-2084

### OPERATING STATUS

1. Unit Name: Zion Unit 1
2. Reporting Period: 0000 900101 to 0000 900131
3. Licensed Thermal Power (MWt): 3250
4. Nameplate Rating (Gross MWe): 1085
5. Design Electrical Rating (Net MWe): 1040
6. Maximum Dependable Capacity (Gross MWe): 1085
7. Maximum Dependable Capacity (Net MWe): 1040
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:  
N/A

Notes

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744.0	744.0	141,024.0
12. Number Of Hours Reactor Was Critical	383.1	383.1	98,460.7
13. Reactor Reserve Shutdowns Hours	0.0	0.0	2,621.8
14. Hours Generator On-Line	112.8	112.8	95,412.5
15. Unit Reserve Shutdowns Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	193,317	193,317	276,715,386
17. Gross Electrical Energy Generated (MWH)	58,946	58,946	89,131,755
18. Net Electrical Energy Generated (MWH)	46,751	46,751	84,753,615
19. Unit Service Factor	15.2	15.2	67.7
20. Unit Availability Factor	15.2	15.2	67.7
21. Unit Capacity Factor (Using MDC Net)	6.0	6.0	57.8
22. Unit Capacity Factor (Using DER Net)	6.0	6.0	57.8
23. Unit Forced Outage Rate	24.7	24.7	12.8
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: \_\_\_\_\_
26. Units In Test Status (Prior to Commercial Operation):

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

## OPERATING DATA REPORT

**DOCKET NO.** 50-304  
**DATE** 2/1/90  
**COMPLETED BY** I. Thomas  
**TELEPHONE** (708) 746-2084

### OPERATING STATUS

1. Unit Name: Zion Unit 2
2. Reporting Period: 0000 900101 to 0000 900131
3. Licensed Thermal Power (MWt): 3250
4. Nameplate Rating (Gross MWe): 1085
5. Design Electrical Rating (Net MWe): 1040
6. Maximum Dependable Capacity (Gross MWe): 1085
7. Maximum Dependable Capacity (Net MWe): 1040
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reasons:  
N/A

Notes

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	744.0	744.0	134,737.0
12. Number Of Hours Reactor Was Critical	715.1	715.1	100,826.1
13. Reactor Reserve Shutdowns Hours	0.0	0.0	226.1
14. Hours Generator On-Line	700.1	700.1	98,137.1
15. Unit Reserve Shutdowns Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,866,455	1,866,455	291,336,102
17. Gross Electrical Energy Generated (MWH)	620,786	620,786	92,966,551
18. Net Electrical Energy Generated (MWH)	580,878	580,878	88,548,168
19. Unit Service Factor	94.1	94.1	72.8
20. Unit Availability Factor	94.1	94.1	72.8
21. Unit Capacity Factor (Using MDC Net)	75.1	75.1	63.2
22. Unit Capacity Factor (Using DER Net)	75.1	75.1	63.2
23. Unit Forced Outage Rate	5.9	5.9	14.2

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

Refueling outage for Unit 2 to start on March 22, 1990 for approximately ten (10) weeks.

25. If Shut Down At End Of Report Period, Estimated Date of Startup: \_\_\_\_\_
26. Units in Test Status (Prior to Commercial Operation):

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

	Forecast	Achieved
_____	_____	_____
_____	_____	_____
_____	_____	_____



**UNIT SHUTDOWNS AND POWER REDUCTIONS**

**DOCKET NO.** 50-295  
**UNIT NAME** Zion Unit 1  
**DATE** 02/01/90  
**COMPLETED BY** J. Thomas  
**TELEPHONE** (708) 746-2084

**REPORT MONTH** January

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	License Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
1	900127	F	20.4	G	3				Turbine trip/reactor trip from 40% on ID SG HiHi level due to operator error during instrument maintenance work on SG level deviation alarm.

<sup>1</sup>  
**F: Forced**  
**S: Scheduled**

<sup>2</sup>  
**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)**

<sup>3</sup>  
**Method**  
**1-Manual**  
**2-Manual Scram**  
**3-Auto Scram**  
**4-Continued**  
**5-Reduced Load**  
**9-Other**

<sup>4</sup>  
**Exhibit C - Instructions for Preparation of Data Entry Sheets for License Event Report (LER) File (NUREG-0161)**

<sup>5</sup>  
**Exhibit I - Same Source**

**UNIT SHUTDOWNS AND POWER REDUCTIONS**

REPORT MONTH January

DOCKET NO. 50-304  
 UNIT NAME Zion Unit 2  
 DATE 02/01/90  
 COMPLETED BY J. Thomas  
 TELEPHONE (708) 746-2084

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	License Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
1	900114	S	80	A	5				Power reduction down to 40% to isolate and repair condenser tube leakage.
2	900118	F	28.9	H	2				Manual reactor trip from 40% power while aligning west-side of Unit 2 condenser following condenser leak repairs. EHC problems contributed to the trip.
3	900124	S	48	A	5				Power reduction down to 50% power due to secondary chemistry problems.

<sup>1</sup>  
**F: Forced**  
**S: Scheduled**

<sup>2</sup>  
**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)**

<sup>3</sup>  
**Method**  
**1-Manual**  
**2-Manual Scram**  
**3-Auto Scram**  
**4-Continued**  
**5-Reduced Load**  
**9-Other**

<sup>4</sup>  
**Exhibit C - Instructions for Preparation of Data Entry Sheets for License Event Report (LER) File (NUREG-0161)**

<sup>5</sup>  
**Exhibit I - Same Source**

**AVERAGE DAILY UNIT POWER LEVEL**

DOCKET NO. 50-295  
 UNIT Zion Unit 1  
 DATE 02/01/90  
 COMPLETED BY J. Thomas  
 TELEPHONE (708) 746-2084

MONTH January

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	-12	17	-12
2	-12	18	-29
3	-12	19	-30
4	-11	20	-12
5	-11	21	-12
6	-10	22	-12
7	-12	23	-12
8	-12	24	-12
9	-12	25	36
10	-12	26	334
11	-12	27	117
12	-12	28	8
13	-12	29	363
14	-12	30	634
15	-12	31	777
16	-12		

**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.



**AVERAGE DAILY UNIT POWER LEVEL**

DOCKET NO. 50-304  
 UNIT Zion Unit 2  
 DATE 02/01/90  
 COMPLETED BY J. Thomas  
 TELEPHONE (708) 746-2084

MONTH January

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	1017
2	957
3	1016
4	1020
5	1033
6	1039
7	1018
8	1018
9	1022
10	1022
11	1022
12	1020
13	1022
14	954
15	341
16	348

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	337
18	9
19	-22
20	343
21	470
22	871
23	1023
24	501
25	453
26	862
27	851
28	876
29	892
30	908
31	948

**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.

## JANUARY

### SUMMARY OF OPERATING EXPERIENCE

#### UNIT 1

The Unit entered the reporting period in hot shutdown for the continuation of the scheduled refueling outage. Unit 1 went into an extended outage on 11/15/89 at 1900 hours.

On 1/15/90, at 0430 hours Unit 1 Reactor became critical. The Unit ended a 141 day refueling/maintenance outage on 1/25/90 at 1809 hours when the Unit was placed on-line. On 1/27/90 at 0816 hours Unit 1 had a Turbine Trip/Reactor Trip from 40% on 1D SG HIK level due to operator error during instrument maintenance work on SG level deviation alarm. Unit 1 became Critical on 1/28/90 at 0440 hours. The Unit was synchronized to the grid on 1/28/90 at 2120 hours. The Unit ended the report period at a power level of 806 MWe (76% reactor power) and having an availability factor of 15.2%.

#### UNIT 2

The Unit entered the report period at a power level of 1070 MWe (99% reactor power).

On 1/18/90 at 0241 hours, Unit 2 had a Manual Reactor Trip from 40% power while aligning west-side of Unit 2 condenser following condenser leak repairs. EHC problems contributed to the trip. On 1/19/90 at 0737 hours the Unit became critical and on 1/19/90 at 2232 the Unit was synchronized to the grid. The Unit ended the report period at a power level of 894 MWe (89% reactor power) and having an availability factor of 94.1%.



JANUARY

MAJOR SAFETY RELATED MAINTENANCE

<u>Equipment Name</u>	<u>Work Performed</u>
(UNIT 1)	
1A Auxiliary Feedwater Pump	Rotating element replacement.
1B Diesel Generator	Replaced failed drive bushing for the left bank air distributor.
0C Component Cooling Pump	Misc. repairs.
(UNIT 2)	
2A Auxiliary Feedwater Pump	Replaced stem on governor valve for the pump.

## REFUELING INFORMATION REQUEST

### Questions:

1. Name of facility.
2. Scheduled date for next refueling shutdown.
3. Scheduled date for restart following refueling.
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)?

If no such review has taken place, when is it scheduled?

5. Scheduled date(s) for submitting proposed licensing action and supporting information.
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.
7. The number of fuel assemblies: (a) in the core and (b) in the spent fuel storage pool.
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.
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity.

Unit 2 - Answers

1. Zion Unit 2
2. Cycle 11 is scheduled to shut down for refueling on March 22, 1990.
3. Cycle 12 is scheduled to start up May 31, 1990.
4. The reload safety evaluation meeting for Cycle 12 was held on December 12, 1989. The on-site review for the Z2C12 reload design will be held prior to Unit start-up.
5. None
6. None
7. The number of fuel assemblies
  - a) in the core is 193, and
  - b) in the spent fuel storage pool from Zion Unit 2 is 664.
8. The present licensed spent fuel pool storage capacity (shared with Zion Unit 1) is 2112 fuel assemblies.
9. Zion Station will lose full core discharge capability (for both units) in May 1993, at the end of Unit 2 Cycle 13, based on the latest Nuclear Stations Refueling Schedule. Full core discharge capability for a single core will be lost in November, 1994, at the end of Unit 2 Cycle 14.



Unit 1 - Answers

1. Zion Unit 1
2. Data for the next refueling outage will be included in next month's report.
3. Unit 1 Cycle 12 was re-connected to the grid on January 25, 1990.
4. The On-site Review for the Z1C12 reload design has been approved.
5. None
6. None
7. The number of fuel assemblies
  - a) in the core is 193, and
  - b) in the spent fuel storage pool from Zion Unit 1 is 708.
8. The present licensed spent fuel pool storage capacity (shared with Zion Unit 2) is 2112 fuel assemblies.
9. Zion Station will lose full core discharge capability (for both units) in May 1993, at the end of Unit 2 Cycle 13, based on the latest Nuclear Stations Refueling Schedule. Full core discharge capability for a single core will be lost in November, 1994, at the end of Unit 2 Cycle 14.