

Commonwealth Edison Company  
Zion Generating Station  
101 Shiloh Boulevard  
Zion, IL 60099-2797  
Tel 847-746-2084

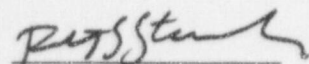
**ComEd**

June 11, 1997

Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Dear Sir:

Attached is the May Operating Status Report.



R. S. Starkey  
Plant General Manager  
Zion Station

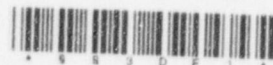
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Enclosure

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Master File

*1. IDNS*

100039



9706190294 970531  
PDR ADOCK 05000295  
R PDR

# OPERATING DATA REPORT

DOCKET NO. 50-295  
 DATE 6/11/97  
 COMPLETED BY J. CYGAN  
 TELEPHONE (847)746-2084  
X3169

## OPERATING STATUS

1. Unit Name: Zion Unit 1
2. Reporting Period: 0000 050197 to 2400 053197
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	3,623.0	205,271.0
12. Number Of Hours Reactor Was Critical	00.0	1,238.3	138,741.3
13. Reactor Reserve Shutdown Hours	00.0	0.0	2,612.8
14. Hours Generator On-Line	00.0	1,238.3	134,804.2
15. Unit Reserve Shutdown Hours	00.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	00.0	3,442,179.0	398,004,120
17. Gross Electrical Energy Generated(MWH)	00.0	1,137,150.0	129,673,297
18. Net Electrical Energy Generated (MWH)	00.0	1,079,324.0	123,571,046
19. Unit Service Factor	00.0	34.2	65.7
20. Unit Availability Factor	00.0	34.2	65.7
21. Unit Capacity Factor (Using MDC Net)	00.0	28.6	57.9
22. Unit Capacity Factor (Using DER Net)	00.0	28.6	57.9
23. Unit Forced Outage Rate	00.0	00.0	15.8
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: No estimated date
26. Units In Test Status (Prior to Commercial Operation): Forecast Achieved

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

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 \_\_\_\_\_  
 \_\_\_\_\_

# OPERATING DATA REPORT

DOCKET NO. 50-304  
 DATE 6/11/97  
 COMPLETED BY J. CYGAN  
 TELEPHONE (847)746-2084  
X3169

## OPERATING STATUS

1. Unit Name: Zion Unit 2
2. Reporting Period: 0000 050197 to 2400 053197
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	3,623.0	198,984.0
12. Number Of Hours Reactor Was Critical	00.0	00.0	138,378.7
13. Reactor Reserve Shutdown Hours	00.0	00.0	226.1
14. Hours Generator On-Line	00.0	00.0	135,098.8
15. Unit Reserve Shutdown Hours	00.0	00.0	0.0
16. Gross Thermal Energy Generated (MWH)	00.0	00.0	402,647,369
17. Gross Electrical Energy Generated(MWH)	00.0	00.0	130,102,951
18. Net Electrical Energy Generated (MWH)	00.0	00.0	124,095,088
19. Unit Service Factor	00.0	00.0	67.9
20. Unit Availability Factor	00.0	00.0	67.9
21. Unit Capacity Factor (Using MDC Net)	00.0	00.0	60.0
22. Unit Capacity Factor (Using DER Net)	00.0	00.0	60.0
23. Unit Forced Outage Rate	00.0	00.0	13.3
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: No estimated date
26. Units In Test Status (Prior to Commercial Operation): Forecast Achieved

INITIAL CRITICALITY  
 INITIAL ELECTRICITY  
 COMMERCIAL OPERATION

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 \_\_\_\_\_  
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## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-295  
 UNIT NAME Zion Unit 1  
 DATE 6/11/97  
 COMPLETED BY J. CYGAN  
 TELEPHONE (847) 746-2084 x3169

REPORT MONTH May 1997

No.	Date	1 Type	Duration (Hours)	2 Reason	Method of Shutting Down 3 Reactor	Licensee Event Report #	System Code 4	Component Code 5	Cause & Corrective Action to Prevent Recurrence
4	05/01/97	S	744.0	*H	1	97-005			Unit 1 Remained Off-Line For The Entire Month For Maintenance Outage Z1M06.

\*H - Please refer to column on right (Cause &amp; Corrective Actions)

1

F: Forced  
 S: Scheduled

2

Reason:  
 A-Equipment Failure (Explain)  
 B-Maintenance or Test  
 C-Refueling  
 D-Regulatory Restriction  
 E-Operator Training & Licensee Examination  
 F-Administrative  
 G-Operational Error (Explain)  
 H-Other (Explain)

3

Method  
 1-Manual  
 2-Manual Trip  
 3-Auto Trip  
 4-Continued  
 5-Reduced Load

4

Exhibit G - Instructions  
 for Preparation of Data  
 Entry Sheets for Licensee  
 Event Report (LER) File  
 (NUREG-0161)

5

Exhibit 1 - Same Source

## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-304  
 UNIT NAME Zion Unit 2  
 DATE 6/11/97  
 COMPLETED BY J. CYGAN  
 TELEPHONE (847) 746-2084 x3169

REPORT MONTH May 1997

No.	Date	<sup>1</sup> Type	Duration (Hours)	<sup>2</sup> Reason	Method of Shutting Down <sup>3</sup> Reactor	Licensee Event Report #	System Code 4	Component Code 5	Cause & Corrective Action to Prevent Recurrence
7	05/01/97	S	744.0	C	1				Unit 2 Remained Off-Line For The Entire Month For The Continuation Of Refueling Outage Z2R14.

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

<sup>2</sup>  
 Reason:  
 A-Equipment Failure (Explain)  
 B-Maintenance or Test  
 C-Refueling  
 D-Regulatory Restriction  
 E-Operator Training & Licensee Examination  
 F-Administrative  
 G-Operational Error (Explain)  
 H-Other (Explain)

<sup>3</sup>  
 Method  
 1-Manual  
 2-Manual Trip  
 3-Auto Trip  
 4-Continued  
 5-Reduced Load

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

<sup>5</sup>  
 Exhibit 1 - Same Source

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-295  
 UNIT Zion Unit 1  
 DATE 6/11/97  
 COMPLETED BY J. CYGAN  
 TELEPHONE (847) 746-2084  
x3169

MONTH May 1997

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	<u>-7</u>
2	<u>-7</u>
3	<u>-7</u>
4	<u>-7</u>
5	<u>-7</u>
6	<u>-7</u>
7	<u>-7</u>
8	<u>-7</u>
9	<u>-7</u>
10	<u>-7</u>
11	<u>-7</u>
12	<u>-7</u>
13	<u>-7</u>
14	<u>-7</u>
15	<u>-7</u>
16	<u>-7</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	<u>-7</u>
18	<u>-7</u>
19	<u>-7</u>
20	<u>-7</u>
21	<u>-6</u>
22	<u>-6</u>
23	<u>-6</u>
24	<u>-6</u>
25	<u>-6</u>
26	<u>-6</u>
27	<u>-6</u>
28	<u>-6</u>
29	<u>-6</u>
30	<u>-6</u>
31	<u>-6</u>

## 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 6/11/97  
COMPLETED BY J. CYGAN  
TELEPHONE (847) 746-2084  
x3169

May 1997

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	<u>-7</u>
2	<u>-7</u>
3	<u>-7</u>
4	<u>-7</u>
5	<u>-7</u>
6	<u>-7</u>
7	<u>-6</u>
8	<u>-6</u>
9	<u>-7</u>
10	<u>-7</u>
11	<u>-6</u>
12	<u>-7</u>
13	<u>-6</u>
14	<u>-7</u>
15	<u>-6</u>
16	<u>-6</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	<u>-6</u>
18	<u>-6</u>
19	<u>-6</u>
20	<u>-6</u>
21	<u>-5</u>
22	<u>-5</u>
23	<u>-5</u>
24	<u>-5</u>
25	<u>-5</u>
26	<u>-5</u>
27	<u>-5</u>
28	<u>-5</u>
29	<u>-5</u>
30	<u>-5</u>
31	<u>-5</u>

## 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.



May 1997

SUMMARY OF OPERATING EXPERIENCE

UNIT 1

Unit 1 began May off-line for a continuation of Maintenance Outage (Z1M06) and remained off-line for the entire reporting period. There is no scheduled date for Unit 1 to be back on-line.

UNIT 2

Unit 2 began May off-line for a continuation of Refueling Outage (Z2R14) and remained off-line for the entire reporting period. There is no scheduled date for Unit 2 to be back on-line.



May 1997

MAJOR MAINTENANCE

EQUIPMENT NAME

WORK PERFORMED

(UNIT 1)

1C CW PP

Inspect/Repair  
Completed  
OOS: 04/28/97 - 05/31/97

'0' D/G

Output Breaker Repair  
Completed  
OOS: 05/19/97 - \*

COMMENT: \* NO RETURN TO SERVICE DATE

May 1997

MAJOR MAINTENANCE

<u>EQUIPMENT NAME</u>	<u>WORK PERFORMED</u>
(UNIT 2)	
2B CW PP	Breaker Overhaul/Inspection Completed OOS: 04/13/97 - 05/15/97
2A C/CB PP	Cleaning/Inspection OOS: 04/26/97 - *
2A CS PP	Coupling Lube OOS: 04/28/97 - *
2C CS PP	Starting Solenoid Changeout OOS: 04/29/97 - *
2A D/G	Repair Fuel Jerk Pump Completed OOS: 05/07/97 - 05/08/97
2B C/CB PP	Lube Completed OOS: 05/08/97 - 05/09/97
2A CW PP	Lube Completed OOS: 05/18/97 - 05/20/97
2C C/CB PP	Breaker Work Completed OOS: 05/21/97 - 05/29/97
2A FW PP	2B Oil Pump Completed OOS: 05/22/97 - 05/29/97

COMMENT: \* NO RETURN TO SERVICE DATE

## 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 the 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.

## REFUELING INFORMATION REQUEST

### UNIT 1 - ANSWERS:

1. Zion Unit 1.
2. Cycle 15 is scheduled to shutdown September 6, 1997 for refueling.
3. Cycle 16 is scheduled to start up November 5, 1997.
4. The following License Amendments are required to allow resumption of operation after Refueling Outage Z1R15.
  - Increase Steam Generator plugging limit. Required to ensure Unit derating will not be required based on Steam Generator plugging.
  - Authorize Steam Generator tube sleeving per new Topical Report. Required to allow additional sleeving options to minimize plugging.
  - Authorize new F\* limit on tube re-roll and new EF\* re-roll limit. Required to support increased plugging limit. Required to allow additional re-roll options to minimize plugging.

The Reload Safety Analysis for cycle 16 will be completed during Z1R15.

5. Projected submittal of License Amendments: June-July 1997.
6. Not applicable.
7. The number of fuel assemblies
  - (a) in the core is 0, and
  - (b) in the spent fuel storage pool from Zion Unit 1 is 1125.
8. The present licensed spent fuel pool storage capacity (shared with Zion Unit 2) is 3012 fuel assemblies. Of these 3012 storage locations, 11 are unavailable and 239 are inaccessible pending completion of the Offset Tool Modification (M22-90-0-008A, C).
9. The projected date of the last refueling that can be discharged to the spent fuel pool, assuming the present licensed capacity of 3012 locations (11 out of 3012 are unavailable) is April 2006 (from Z1R21) based on the 1997 Projected ComEd Overhaul Schedule. This assumes the Offset Tool Modification (M22-90-0-008A, C) will be installed prior to June 2003. This projected date is subject to change based on outage durations or Overhaul Schedule changes.



## REFUELING INFORMATION REQUEST

### UNIT 2 - ANSWERS:

1. Zion Unit 2.
2. Cycle 14 shutdown September 19, 1996 for refueling.
3. Cycle 15 has no scheduled date for start up.
4. There are no outstanding License Amendments required for startup of Unit 2 following Refueling Outage Z2R14.
5. There are no outstanding proposed License Amendments required for startup of Unit 2 following Refueling Outage Z2R14.
6. New fuel reloaded into Unit 2 Cycle 15 core incorporates the following design changes:
  - Selected standard Integral Fuel Burnable Absorber (IFBA) patterns have been updated following a Westinghouse Core Engineering investigation of peripheral IFBA rod loading within the fuel assembly. The net effect of this change is to achieve the most efficient absorber orientation at Beginning of Life (BOL) and for burnups through 5000 MWD/MTU. These patterns provide self-limiting features that mitigate the extent of DNB propagation. In addition, these IFBA patterns provide significant peaking factor and reactivity holddown benefits.
  - IFBA rods will have a nominal B-10 enrichment loading with a reduction in backfill pressure from 200 to 100 psig. The nominal B-10 loading is 1.77 mg/inch. Rod internal gas pressure has an effect on two of the fuel rod design criteria that are evaluated for the reload: Rod internal pressure and clad stress criteria. The Zion Unit 2 Cycle Specific fuel design analysis has been performed and has demonstrated that the design criteria were met.
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 984.
8. The present licensed spent fuel pool storage capacity (shared with Zion Unit 1) is 3012 fuel assemblies. Of these 3012 storage locations, 11 are unavailable and 239 are inaccessible pending completion of the Offset Tool Modification (M22-90-0-008A, C).
9. The projected date of the last refueling that can be discharged to the spent fuel pool, assuming the present licensed capacity of 3012 locations (11 out of 3012 are unavailable) is April 2006 (from Z1R21) based on the 1996 Projected ComEd Overhaul Schedule. This assumes the Offset Tool Modification (M22-90-0-008A, C) will be installed prior to June 2003. This projected date is subject to change based on outage durations or Overhaul Schedule changes.