

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Zion Station, Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 0 4										PAGE (3) 1 OF 0 2	
TITLE (4) 2B D/G Overspeed Trip with 2B RHR Pump Inoperable																					
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)									
0 7	1 8	8 5	8 5	0 1 4	0 0 0	8 1	5 8	5				0 5 0 0 0									
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																					
OPERATING MODE (9)		1		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)											
POWER LEVEL (10)		0 1 6 1 8		20.405(a)(1)(i)		X 50.38(c)(1)		50.73(a)(2)(v)		73.71(c)											
				20.405(a)(1)(ii)		50.38(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)											
				20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)													
				20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)													
				20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)													
LICENSEE CONTACT FOR THIS LER (12)																					
NAME Michael W. Krysiak								TELEPHONE NUMBER 3 1 2 7 4 6 - 2 0 8 4													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS												
B	E K	- 1 - 6 5	W 2 9 0	Yes																	
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO											

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 18, 1985 Unit 2 was at 67.9% power. "2B" RHR pump was out of service. "2B" diesel generator was started for PT-11, "Diesel Generator Loading Test". The engine reached its rated speed but continued to drift upward. The operator waited for the engine speed to stabilize. When corrective action was taken to limit the speed drift, sluggish governor response limited the corrective action and the engine tripped on overspeed. A GSEP Unusual Event was declared for having a diesel generator and RHR pump inoperable.

Acceptable governor operation was verified during maintenance runs. A temporary procedure change to PT-11 was initiated to limit inherent speed rise during PT-11 testing. Engine operability was verified by successfully completing a PT-11 test. At 0746 on July 18, 1985 the GSEP Unusual Event was terminated.

On July 25, 1985 the governor on "2B" diesel generator was replaced. The temporary procedure change was cancelled. No further corrective action was necessary.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Zion Station, Unit 2	0 5 0 0 0 3 0 4 8 5 -	0	1	4	-	0 0 0 2 OF 0 2

TEXT (If more space is required, use additional NRC Form 366A's) (17)

On July 18, 1985 Unit 2 was at 67.9% power. "2B" RHR pump was out of service for maintenance. At 0550 hours "2B" diesel generator was started for PT-11, "Diesel Generator Loading Test". The engine started, reached 620 rpm, and continued to drift upward in speed. The operator waited for the engine speed to level off. When corrective action was taken to stop the speed drift, governor response appeared sluggish. The engine then tripped on "Overspeed". A GSEP Unusual Event was declared for having a diesel generator and RHR pump inoperable. All required notifications were made.

2 local starts were made on "2B" diesel generator. Engine speed was varied manually from the governor and then from the engine control panel. The manual control on the governor was binding. The governor remote speed control operated normally, but the governor reacted a little sluggishly. The engine was started and loaded from the control room and appeared to be operating within normal limits.

At 0630 hours on July 18, 1985 "2B" diesel generator was started per PT-11. At 0746 hours the PT-11 on "2B" diesel generator was completed and the GSEP Unusual Event was terminated.

The diesel generators use a Woodward UG-40 governor. When installed on the engine, for emergency mode of operation the governor is set to run the engine at 600 rpm with a synchronizer setting of 12. During testing 50% droop is dialed in on the governor for generator protection while running synchronized to the system. Adding 50% droop will normally add 10 to 20 rpm to the initial governor setting of 600 rpm. Following a test the operator has to manually increase the synchronizer setting to obtain a 600 rpm speed in the emergency mode. This will sometimes cause drift in the upper speed direction.

This "Overspeed" trip is believed to have been caused by:

1. The increased speed setting caused by dialing in 50% droop.
2. The inherent speed drift caused by increasing the synchronizer setting following the previous test.
3. The sluggish operation of the governor.

A temporary procedure change was initiated to allow for a lower speed setting during PT-11 tests. This change compensated for the speed increase due to the addition of speed droop and the sluggish governor reaction.

A rebuilt governor was installed on July 25, 1985 and the temporary procedure change was cancelled.

This is the first reported engine trip caused by sluggish governor operation. No further corrective action is necessary.



**Commonwealth Edison**

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Zion, Illinois 60099  
Telephone 312/746-2084

August 15, 1985

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

References: 10CFR50

Dear Sir:

The enclosed Licensee Event Report from Zion Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.36(c)(2) which requires a 30 day written report when there has been a failure to meet a Technical Specification limiting condition for operation.

This report is number 85-014-00, Docket No. 50-304/DPR-48.

Very truly yours,

K. L. Graesser  
Station Manager  
Zion Generating Station

KLG/rmm

Enclosure: Licensee Event Report No. 85-014-00

Attachment

cc: J. G. Keppler, NRC Region III Administrator  
M. Holzmer, NRC Resident Inspector  
INPO Record Center  
CECo Distribution List

IE22  
1/1