

50-237/249

## NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER  
INCIDENT REPORT

TO: Mr. James G. Keppler

FROM: Commonwealth Edison Company  
Morris, Ill.  
B. B. Stephenson

DATE OF DOCUMENT  
4/4/77DATE RECEIVED  
4/12/77

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INPUT FORM

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1 signed

## DESCRIPTION

Ltr. trans the following:

PLANT NAME:  
Dresden Units 2 & 3

RJL

(1-P) (2-P)

## ENCLOSURE

Licensee Event Report (RO 50-237/1977-11) on  
3/22/77 concerning the Unit 3 diesel generator  
being found to be inoperable.....

ACKNOWLEDGED

DO NOT REMOVE

NOTE: IF PERSONNEL EXPOSURE IS INVOLVED  
SEND DIRECTLY TO KREGER/J. COLLINS

## FOR ACTION/INFORMATION

BRANCH CHIEF:	Ziemann		
W/3 CYS FOR ACTION			
LIC. ASST.:	Disgs		
W/1 CYS			
ACRS 16 CYS HOLDING/SENT	As CAT B		

## INTERNAL DISTRIBUTION

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## EXTERNAL DISTRIBUTION

LPDR: Morris, Ill				
TIC:				
NSIC:				

CONTROL NUMBER

771040417

1950-1951

1952-1953



**Commonwealth Edison**  
Dresden Nuclear Power Station  
R.R. #1  
Morris, Illinois 60450  
Telephone 815/942-2920

BBS Ltr. #77-285

April 4, 1977



Mr. James G. Keppler, Regional Director  
Directorate of Regulatory Operations - Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

REFERENCES: Docket Number 50-237  
Docket Number 50-249

Regulatory

File CYA

Enclosed please find Reportable Occurrence report number 50-237/1977-11.  
This report is being submitted to your office in accordance with the Dresden  
Nuclear Power Station Technical Specifications, Section 6.6.B.

B. B. Stephenson  
Station Superintendent  
Dresden Nuclear Power Station

BBS:jo

Enclosure

cc: Director of Inspection & Enforcement  
Director of Management Information & Program Control  
File/NRC

771040417

APR 7 1977

12.4.66

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# LICENSEE EVENT REPORT

CONTROL BLOCK: [ ] [ ] [ ] [ ] [ ] [ ]

[PLEASE PRINT ALL REQUIRED INFORMATION]

LICENSEE NAME [01] [I] [L] [D] [R] [S] [2]														LICENSE NUMBER [0] [0] [0] [0] [0] [0] [0] [0] [0] [0] [0] [0]										LICENSE TYPE [4] [1] [1] [1] [1]					EVENT TYPE [0] [1]								
CATEGORY [01] CONT														REPORT TYPE [T]		REPORT SOURCE [L]		DOCKET NUMBER [0] [5] [0] [0] [2] [3] [7]										EVENT DATE [0] [3] [2] [2] [7] [7]					REPORT DATE [0] [4] [0] [5] [7] [7]				

## EVENT DESCRIPTION

[02] At approximately 0200 hours on 3/22/77, the Unit-3 diesel generator was found to be

[03] inoperable (R.O. report no. 50-249/1977-7). As required by Tech Specs, an operability

[04] test of the Unit-2/3 diesel generator was performed at 0228 hours; however, the

[05] Unit-2/3 diesel failed to start. The Unit-2/3 diesel generator was then restarted

[06] satisfactorily at 0245 hours. As an additional precaution, a third (and successful)

SYSTEM CODE [07] [E] [E]		CAUSE CODE [E]		COMPONENT CODE [E] [N] [G] [I] [N] [E]				PRIME COMPONENT SUPPLIER [A]		COMPONENT MANUFACTURER [W] [0] [9] [7]				VIOLATION [Y]	
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## CAUSE DESCRIPTION

[08] During the initial start attempt, the Unit-2/3 diesel apparently turned over for

[09] approximately 4 seconds before shutting down. It is believed that an air start

[10] motor pinion gear jammed momentarily against the ring gear before slipping into

FACILITY STATUS [11] [E]		% POWER [0] [5] [7]		OTHER STATUS NA		METHOD OF DISCOVERY [C]		DISCOVERY DESCRIPTION NA	
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FORM OF ACTIVITY RELEASED [12] [Z]		CONTENT OF RELEASE [Z]		AMOUNT OF ACTIVITY NA		LOCATION OF RELEASE NA	
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## PERSONNEL EXPOSURES

NUMBER [13] [0] [0] [0]		TYPE [Z]		DESCRIPTION NA	
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## PERSONNEL INJURIES

NUMBER [14] [0] [0] [0]		DESCRIPTION NA	
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## OFFSITE CONSEQUENCES

[15] NA	
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## LOSS OR DAMAGE TO FACILITY

TYPE [16] [Z]		DESCRIPTION NA	
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## PUBLICITY

[17] NA	
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## ADDITIONAL FACTORS

[18] NA	
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[19]	
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NAME: Jeff Martin

PHONE: Ext. 421



#### EVENT DESCRIPTION (Continued)

attempt to start the Unit-2/3 diesel was made at 0320 hours.

This event was of little safety significance, since the Unit-2/3 diesel generator was inoperable for a relatively brief period (45 minutes), and off-site power remained available during this interval. The diesel generators at Dresden have experienced several starting failures in the past. (50-237/1977-11)

#### CAUSE DESCRIPTION (Continued)

position. Since the diesel automatically shuts down if it fails to reach 200 rpm within 15 seconds of a start initiation, the starting failure was probably caused by a delay in pinion gear engagement, which allowed the 15-second interval to elapse before the diesel had come up to speed.

Following the return to service of the Unit-3 diesel generator, the Unit-2/3 diesel was tested to determine the cause of failure. During a start attempt, one of the air start motor pinion gears actually jammed against the ring gear, preventing the start-up of the diesel. The failure of the pinion gear to engage was found to be the result of a defective air start motor, which had been recently installed (2/16/77) during an annual maintenance inspection of the diesel.

New air start motors were installed, and proper engagement was verified several times by intentionally misaligning the teeth of the pinion gears with those of the ring gear prior to each engagement attempt. The air start motor pinion gears engaged satisfactorily each time. The Unit-2/3 diesel generator was then successfully started several times before being returned to service.

A procedure revision has been initiated to ensure that positive pinion gear engagement is verified after the routine annual replacement of the air start motors. This verification will be accomplished by means of the deliberate pinion gear misalignment technique described above. In this manner, any faulty or misaligned air start motor will be readily identified before it is placed in service.

The defective air start motor is an Ingersoll-Rand unit, rated at 247 hp at 200 psi.

