



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

BBS Ltr. #195-75

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
March 27, 1975

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

SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.A OF THE TECHNICAL
SPECIFICATIONS
FAILURE OF UNIT 2 DIESEL GENERATOR TO START

- References: 1) Regulatory Guide 1.16 Rev. 1 Appendix A
- 2) Notification of Region III of U. S. Nuclear Regulatory Commission
Telephone: P. Johnson, 1430 hours on March 18, 1975
Telegram: J. Keppler, 1430 hours on March 18, 1975
- 3) Drawing Number M173

Report Number: 50-237/1975-16

Report Date: March 27, 1975

Occurrence Date: March 17, 1975

Facility: Dresden Nuclear Power Station, Morris, Illinois

IDENTIFICATION OF OCCURRENCE

Unit 2 was in the cold shutdown mode during an extended refueling outage. The calibration of various pressure gauges had just been completed when the diesel generator failed to start.

DESCRIPTION OF OCCURRENCE

On March 17, 1975 at approximately 2000 hours, the Unit 2 diesel generator failed to start. The operator then struck the air start solenoid and the diesel generator started.

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DESIGNATION OF APPARENT CAUSE OF OCCURRENCE (Fabrication Error)

The maintenance performed just prior to the failure was not related in any way to the starting problem. The air start solenoid also did not appear to be the problem but was disassembled, cleaned and reinstalled. The diesel generator was then started several times and some additional failures were experienced. The problem was traced to the air start motors where it was found that the pinion gears were not properly engaging the ring gear. Another problem with the diesel generator became evident when it failed to come up to voltage during some of the test runs. This matter will be discussed in subsequent report number 50-237/1975-18.

ANALYSIS OF OCCURRENCE

Public health and safety were not jeopardized due to this occurrence because the redundant Unit 2/3 diesel generator was operable and could have been employed if necessary.

CORRECTIVE ACTION

The unit 2 diesel generator was immediately taken out of service and an investigation began the morning of March 18, 1975. A series of startup tests were conducted which indicated that the air start motors may have been the problem. The two air start motors were then replaced and sent back to the factory for inspection to determine the exact cause of failure. Based on the results of a report to be written by the factory, additional corrective action may be initiated.

FAILURE DATA

Many of the previous starting problems encountered with the diesel generators at Dresden have been attributed to faulty air start systems. These problems were primarily due to excess dirt and oil in the system or solenoid valve failure. Periodic cleaning and replacement of the various components in the air system has been effective in reducing these problems. Worn pinion gears have caused this type of failure in the past, but since the air start motors involved here were relatively new (installed January 18, 1975) it would appear the problem was in manufacturing.

The unit 2 diesel generator was manufactured by Electro-motive division, General Motors Corporation. It is rated at 2500 kw, 4160 V and 900 RPM. The air start motors were manufactured by Ingersoll-Rand.

Arthur M Roberts
for B. B. Stephenson
Superintendent

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File/NRC