



Commonwealth Edison  
1400 Opus Place  
Downers Grove, Illinois 60515

March 4, 1992

Mr. A. Bert Davis  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Subject: Braidwood Station Unit 2  
Diesel Generator 2DG01KA Failure  
NRC Docket No. 50-457

Reference: (a) NUREG-1276, Technical Specification  
(b) November 21, 1991, T.W. Simpkin letter  
to A.B. Davis

Dear Mr. Davis:

Section 4.8.1.1.3 of reference (a) requires that all diesel generator failures, valid or non-valid, be reported to the NRC pursuant to Specification 6.9.2. The enclosure provides the report that addresses one valid and one invalid failure 2DG01KA diesel generator. The criteria used to determine valid tests and failures is taken from section C.2.e of Regulatory Guide 1.108.

Reference (b) is the most recent report addressing diesel generator failures, submitted per Section 4.8.1.1.3.

Please direct any questions concerning this submittal to this office.

Very truly yours,

T.W. Simpkin  
Nuclear Licensing Administrator

cc: R. Pulsifer - NRR  
B. Clayton - RIII  
Resident Inspector - Braidwood  
NRC Document Control Desk

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On Monday, January 20, 1992, at 2000 hours, the Braidwood Unit 2, A Train (2A) Diesel Generator (DG) was removed from service for planned routine maintenance. This event caused entry into Technical Specification 3.8.1.1 Action (a). Following completion of the planned maintenance activities, a post maintenance verification run of the 2A DG was performed. The 2A DG was loaded to full capacity, (5500 KW), unloaded, and taken off line in accordance with Station Operating Procedures with no problems noted. The 2A DG was started on Tuesday, January 21, 1992, for an operability surveillance at 2053 hours. After being loaded to approximately 1425 KW, the 2A DG tripped on "Main & Conn Rod, Generator Outboard Brg. Temp. High" at 2118 hours.

Trouble-shooting determined that the temperature detector actuated on the #8 connecting rod bearing. (Lube oil and jacket water temperatures were normal at the time of the trip.) Opening the crankcase verified that one of the two eutectic high temperature detectors had actuated on the # 8 connecting rod bearing. A Cooper-Bessemer Field Representative was called to the site.

The actuated temperature detector was removed. Upon inspection of the temperature detector by site personnel, the Cooper-Bessemer Field Representative, and a representative from Commonwealth Edison's System Materials Analysis Department (SMAD), it was determined that a poor solder connection (the eutectic material) had been made during the manufacturing of the temperature detector. The defective detector actuated prematurely due to normal engine operation. As a precaution, the connecting rod bearing cap was removed and the bearing was inspected. No signs of abnormal wear or excessive heating were noted. The Cooper-Bessemer Field Representative judged the bearing as having only signs of normal wear. The 2A DG trip was determined to be spurious due to the failure of the #8 connecting rod bearing high temperature detector. This trip would not have occurred if the 2A DG had been operating in the Emergency Mode.

A new temperature detector was installed. Also, a new bearing was installed in the #8 connecting rod to ensure that a proper wear pattern is achieved. The prescribed Cooper-Bessemer procedure for "break-in" was performed. Following the "break-in" run, the normal operability surveillance was successfully performed. The 2A DG was returned to an operable status at 1658 hours on January 23, 1992.

This failure was determined to be invalid per Regulatory Guide 1.108, Section C.2.e. This is the first failure of this type. As of January 30, 1992, the 2A DG has had one valid failure in its last 20 valid demands. The 2A DG has had 3 valid failures and the Braidwood Unit 2B DG has had no valid failures in the last 100 U-2 DG valid DG demands.

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