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January 16, 1986

Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Re: Catawba Nuclear Station, Unit 2
Docket No. 50-414
Significant Deficiency No. 414/86-01

Dear Dr. Grace:

Pursuant to 10 CFR 50.55(e), please find attached Significant Deficiency Report No. 414/86-01.

Very truly yours,

H.B. Tucker /BS

Hal B. Tucker

LTP:slb

Attachment

cc: Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

NRC Resident Inspector
Catawba Nuclear Station

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Catawba Nuclear Station

REPORT NUMBER: SD 414/86-01

REPORT DATE: January 16, 19865

FACILITY: Catawba Nuclear Station, Unit 2

IDENTIFICATION OF DEFICIENCY: During a break-in run of the Catawba Unit 2B diesel generator, the #7 main bearing shell failed. The engine was repaired using new parts, and upon attempting a start up, the #7 main bearing was "wiped".

INITIAL REPORT: On December 19, 1985, Mr, Chuck Burger of NRC Region II, Atlanta, Georgia office, was notified of this deficiency by Mr. L. M. Coggins, Mr. C. W. Hendrix, Mr. J. M. Lines, Mr. R. L. Oakley and Mr. M. L. Sanger of Duke Power Company, Charlotte, N. C.

COMPONENT AND/OR SUPPLIER: Transamerica Delaval Inc., of Oakland, California, manufactured and supplied the Catawba diesel generators. The bearing shells were manufactured by the Aluminum Company of America (Alcoa) and installed by Transamerica Delaval, Inc. initially and reinstalled by Duke Power Company.

DESCRIPTION OF DEFICIENCY: During the break-in run of the Catawba Unit 2B diesel engine, the #7 main bearing shell failed. Since the engine was in a maintenance mode, a high bearing temperature sensor reading caused the engine to trip off. Inspections revealed minor scoring, a transfer of aluminum from the bearing shell to the journal, and breakage of the bearing shell. Repairs were made, and a replacement shell installed. Upon attempting a startup following the repairs, the #7 main bearing shell was "wiped". Inspections also revealed the replacement bearing shell to be cracked.

Preliminary studies indicate both of these failures are due to slight misinstallation of the bearing shells, by Transamerica Delaval Inc. in the first situation and by Duke Power in the second situation.

ANALYSIS OF SAFETY IMPLICATIONS: Since the first failure occurred after 200 + hours of operation, the bearing shell was "captured" in place, and the engine tripped off in the maintenance mode, not the emergency mode, it would be reasonable to expect that the diesel could continue to operate in an emergency mode if required. Due to the lack of information to substantiate this point, this item is evaluated to be reportable. Since this failure is not generic, and the emergency diesels are part of a redundant safety-system, the loss of one diesel would not compromise the safety of the plant.

CORRECTIVE ACTION: Due to the indication that the #7 main bearing shells were slightly misaligned upon installation, the Duke Power installation procedures have been enhanced to help prevent a recurrence of a failed bearing. The crankshaft journal has been cleaned and polished, and the #7 main bearing shell has been replaced. In addition, a high velocity oil flush to remove contaminants from the diesel lube oil system will be completed prior to start up of the diesel. A follow-up report on this deficiency will be provided prior to fuel load.