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March 2, 1993

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

Subject: Catawba Nuclear Station, Unit 2
Docket No. 50-414
Special Report
Invalid Failure of Diesel Generator 2B

Pursuant to Technical Specification 4.8.1.1.3 and 6.9.2, find attached a Special Report concerning the Unit 2 Diesel Generator (DG 2B) invalid failure that occurred on January 31, 1993.

Very truly yours,

M. S. Tuckman

MS Tuckman

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Attachment

xc: SD Ebneter
Regional Administrator, Region II

WT Orders
Senior Resident Inspector

RE Martin, ONRR

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SPECIAL REPORT

CATAWBA NUCLEAR STATION
DIESEL GENERATOR 2B INVALID FAILURE
DUE TO HIGH CRANKCASE PRESSURE

An invalid failure of Diesel Generator (DG) 2B occurred on January 31, 1993 at 1145 (Start #709) due to a high crankcase pressure trip. This was caused by a failure of the Calcon sensor that is utilized in this application. Unit 2 was in Mode 4 in 2EOC5 refueling outage at the time this failure occurred. Operations (OPS) was in the process of running DG 2B for the Technical Specification (TS) required 24 hour run. There have been 0 valid failures in the last 20 valid tests and 1 valid failure in the last 100 valid tests. DG 2B remains on a monthly operability test schedule in accordance with TS 4.8.1.1.2 Table 4.8-1. There is no unavailability time associated with this failure.

DG 2B was manually started on January 31, 1993 for the TS required 24 hour run. After running approximately 60 seconds, the engine tripped. All of the Group II trip annunciators were received at the time the trip occurred. The engine was then given an emergency start signal by Instrument and Electrical (IAE) personnel to allow time for a Component Engineering (CE) engineer to observe the various indications without the engine tripping. After this start, it was immediately noticed that the instrument air pressure required to operate the pneumatic shutdown logic system was not rising to its required 60 psi, which was indicative of an air leak somewhere in the system. Approximately 1 minute into this run, all the Group II trip annunciators were received. There have recently been problems with several crankcase pressure sensor failures on this engine, so this was immediately checked. The crankcase pressure sensor was found to have air blowing out of its vent port during this time when it should have been blocked. Crankcase pressure, as read on the panel manometer, did not indicate any adverse pressure. After this was determine to be the cause, CE requested that the emergency start be reset so the engine would shutdown as designed.

Since there was no replacement sensor in stock, it was decided that a Temporary Station Modification (TSM) which would bypass the crankcase pressure trip would be the quickest and most reliable method to enable the 24 hour run to continue. The tubing vent line to this sensor was plugged in the engine control panel per the TSM. OPS initiated an increased surveillance on the crankcase pressure manometer during the diesel run so that any crankcase pressure increase could be evaluated and the engine manually tripped as necessary. The engine was then restarted and the 24 hour run was completed.

The failed sensor is still mounted in place on 2B DG engine. It will be removed during the present 2EOC5 refueling outage for the implementation of a Nuclear Station Modification which will replace the pneumatic shutdown logic system with an electrical equivalent system.