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DUKE POWER

May 15, 1991

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 B (D/G 2B) invalid failure that occurred on April 15, 1991.

Very truly yours,

M. S. Tuckman

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CRL/DG2B5159

Attachment

xc: S. D. Ebner
Regional Administrator, Region II

R. E. Martin, ONRR

W. T. Orders
Senior Resident Inspector

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SPECIAL REPORT

CATAWBA NUCLEAR STATION

DIESEL GENERATOR 2B INVALID FAILURE DURING OPERABILITY TESTING OF ENGINE

An invalid failure (Start #631) of Diesel Generator (D/G) 2B occurred on April 15, 1991. The failure occurred while closing D/G breaker 2ETB 18 when synchronizing to the energized bus during the monthly operability performance test, PT/2/A/4350/02B. There have been zero valid failures in the past 20 valid starts and three valid failures in the past 100 valid starts for D/G 2B. The test surveillance interval is once per thirty-one days for both D/G's which is in compliance with Technical Specification 4.8.1.1.2 Table 4.8-1.

The operator was in the process of becoming qualified on Diesel Generators and was performing this test as part of the increased emphasis being placed on the potential for reverse power relay actuations. PT/2/A/4350/02B instructs the operator to load the D/G to greater than or equal to 5600 kW but less than or equal to 5750 kW. This is done by increasing load while adjusting voltage to maintain approximately a 0.98 lagging power factor. The D/G was loaded to greater than 5750 kW with a lagging power factor of approximately 0.60. A reverse power trip was received when the load was reduced to within the 5600 kW to 5750 kW range. The trip occurred from the combination of reducing load along with the lagging power factor condition. This start attempt was classified as an invalid failure per Regulatory Guide 1.108, since the trip was due to operator error. Special Reports were submitted to the NRC for similar situations on both D/G's which occurred during 1990 and in January 1991.

In an effort to reduce the potential for this type of invalid failure, new operators are required to perform the paralleling and loading operation as part of their training requirements.

The D/G was available during this period since the reverse power relay trip and associated synchronizing circuitry are bypassed on an emergency start.