

DUKE POWER COMPANY

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June 17, 1988

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: McGuire Nuclear Station, Unit 1  
Docket No. 50-369  
Technical Specification 4.8.1.1.3 and 6.9.2

Gentlemen:

Pursuant to Technical Specification (T.S.) 6.9.2 as specified by T.S. 4.8.1.1.3, please find attached a special report concerning Diesel Generator (D/G) 1B which experienced a valid failure on May 18, 1988.

Should there be any questions concerning this matter, please contact Steve LeRoy of the Duke Nuclear Production Department Licensing staff at (704) 373-6233.

Very truly yours,

*J. W. Hampton, for*  
Hal B. Tucker

SEL/285/bhp

Attachment

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ATTACHMENT  
DUKE POWER COMPANY  
McGUIRE NUCLEAR STATION, UNIT 1

Diesel Generator Special Report

On May 18, 1988 at 1840, while Unit 1 was operating in Mode 1, Power Operation at 100 percent power level, Diesel Generator (D/G) 1B was started for an operability test (start attempt #582). D/G 1B was stopped shortly after starting due to large differences in the cylinder exhaust temperatures. The start attempt was declared a valid failure and D/G 1B was declared inoperable. A work request was written to investigate and repair the problem. It was determined that three fuel injection pumps had failed and that a thermocouple were creating the large temperature differences on four of the sixteen cylinders of the diesel. Prior to the operability test, the diesel fuel oil back pressure regulator valve had been disassembled and repaired by Maintenance (MNT) personnel. It is believed that fuel and a volume of trapped air shook debris loose from the engine mounted duplex fuel filter which caused the fuel pumps to fail. This belief is based on the fact that large particles of debris were found to have caused the plungers inside the three fuel pumps to stick and not operate. The duplex fuel oil filter cartridges were replaced, the fuel oil headers supplying the fuel oil injection pumps were flushed with clean fuel oil, and the fuel oil pumps were replaced.

The fuel oil duplex filter was found not to have a routine preventative maintenance schedule; therefore, a step was added to the 18 month D/G preventative maintenance procedure to replace the fuel oil cartridges. The exhaust cylinder temperature thermocouple was found to be erroneous and a work request was written to repair the thermocouple.

On May 19, 1988 at 1407, D/G 1B was started for an operability test (start attempt #583). The diesel was stopped due to a starting and loading time of 11.1 seconds which is greater than the 11 seconds allowed by the Technical specification to start and load the D/G to 4160 volts. The start attempt was declared an invalid test failure. The slow start was expected and was due to residual air that could not be bled from all of the fuel oil headers, fuel oil duplex filter, and associated piping. The D/G was restarted at 0429 (start attempt #584) and D/G 1B was declared operable at 0530 following the successful start.

The failure that occurred during this incident is the third valid failure in the last 100 valid starts on Unit 1.