

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
April 19, 1990

Attachment

Duke Power Company  
McGuire Nuclear Station  
Diesel Generator 1A Special Report

On March 3, 1990 at 2031, Diesel Generator (DG) 1A failed to start during Start Attempt No. 781. Work request no. 140801 was initiated to investigate the cause of the failure. At 2146, Start Attempt No. 782 was made to troubleshoot the previous failure. Again, the engine did not start and the cause was determined to be a failure of the cooling water high temperature switch (1KDTS5100). Since this trip switch is by-passed in the emergency mode of operation, Start Attempt No. 781 is considered an Invalid Test Failure. Start Attempt No. 782 was an Invalid Test Attempt for troubleshooting. Start Attempt No. 783 was made with 1KDTS5100 by-passed to allow performance testing (PT/1/A/4350/15A, DG 18 Month Test) while the switch was being replaced. The engine started successfully. This test is considered invalid because the run was terminated intentionally without loading the DG. Temperature switch 1KDTS5100 was replaced and Start Attempt No. 784 was performed satisfactorily. This start attempt is also an Invalid Test because the DG was intentionally not loaded.

On March 4, 1990 at 0929, Start Attempt No. 785 was made, but the DG failed to start. Approximately 4 seconds later, Start Attempt No. 786 was made resulting in a successful start. This start is considered an Invalid Test because the DG was not loaded to 50% load. Work request no. 75312 was initiated to investigate the failure. The cause of the failure was due to loose sliding links at terminations C33 and E33. The nuts on the back of the links were found to have stripped threads. The nuts were replaced. Start Attempt No. 785 is considered an Invalid Test Failure because both of these links are by-passed in the emergency mode of operation. On March 4, 1990 at 0945, Start Attempt No. 787 was made and performed satisfactorily.

Both of the aforementioned Invalid Test Failures are considered to be random and due to normal equipment wear. Neither failure would have affected DG operation in an emergency since they were by-passed in the start circuit; therefore, no corrective actions are deemed necessary at this time.

DG 1A has experienced 1 Valid Failure in the last 20 Valid Tests and 3 Valid Failures in the last 100 Valid Tests. Surveillance test frequency is monthly. On a unit basis, there have been 5 Valid Failures in the last 100 Valid Tests.

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