

Northeast  
Nuclear Energy

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The Northeast Utilities System

Donald B. Miller, Jr.  
Senior Vice President - Millstone

Docket No. 50-423  
Re: 10CFR50.36

April 14, 1994  
MP-94-266

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

Millstone Nuclear Power Station, Unit No. 3  
Train B Emergency Diesel Generator Start Failure

Gentlemen:

This special report is being submitted within thirty days pursuant to Technical Specifications 4.8.1.1.3 and 6.9.2. Technical Specification 4.8.1.1.3 requires that a special report be submitted to the NRC within 30 days for any valid or nonvalid emergency diesel generator (EDG) failure. This Specification also requires information recommended in Regulatory Guide 1.108, Revision 1, Regulatory Position C.3.b, August 1977, to be included in the report.

On March 18, 1994, at 1803 hours, with the plant in Mode 1 at 100% power, 2253 psia and 587 degrees Fahrenheit ( $T_{ave}$ ), a monthly operational test was being performed on the "B" train EDG following maintenance. While conducting this test, the "B" diesel started and the generator came up to speed. However, the generator exciter field did not flash which resulted in an unsuccessful loading of the generator. The "A" train EDG was unaffected and remained operable.

This failure was the first (1<sup>st</sup>) start failure in the last 100 valid tests. The current EDG start surveillance test interval is once per 31 days, under Technical Specification 4.8.1.1.2. This interval conforms with the 31-day schedule of Regulatory Guide 1.108, Regulatory Position C.2.d. Since no other failures have occurred in the last 100 tests, the surveillance interval will remain at 31 days.

The "B" EDG had already been placed in an inoperable status in order to conduct the monthly surveillance. As immediate action, it was determined that no alarms had annunciated to indicate any problems. However, it was found that an indicating light for the "Diesel Ready to Auto Start," had blown on the local control panel. A check of fuses for this light circuit found that one fuse had blown. A replacement light and fuse were installed, and the monthly EDG surveillance test was successfully completed at 0226 hours on March 19, 1994. The total time that the diesel was inoperable due to the start failure was 8.38 hours.

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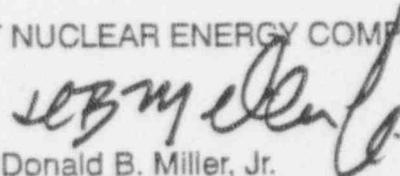
As further corrective action, an investigation was conducted in order to determine the effect of the blown light and fuse. The diesel had started and achieved rated speed. The light had failed in a closed-short manner that created an overcurrent condition in the circuit, which exceeded the fuse capacity. The blown fuse resulted in the loss of the "B" EDG governor control circuit. This, in turn led to the failure of the generator field to flash and an unsuccessful generator loading. As action to prevent recurrence, a new light fixture with a current-limiting resistor has been installed for each EDG, so that a shorted indicating light cannot cause an overcurrent condition.

The spurious failure of the indicating light is a random single event. There have been no other cases of a spurious failure of an indicating light resulting in a diesel start failure.

The licensee contact for this special report is W. J. Temple, who may be contacted at (203) 437-5904.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



Donald B. Miller, Jr.

Senior Vice President - Millstone Station

DBM/RLM:ljs

cc. T. T. Martin, Region I Administrator  
P. D. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3  
V. L. Rooney, NRC Project Manager, Millstone Unit No. 3