

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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January 27, 1983

Docket No. 50-336
A02905

Mr. Thomas T. Martin
Director, Division of Engineering
and Technical Programs
Region I, U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

- References: (1) W. G. Counsil letter to R. A. Clark, dated
October 9, 1981.
- (2) T. T. Martin letter to W. G. Counsil, dated
November 19, 1982.
- (3) E. S. Brunner letter to W. G. Counsil, dated
April 22, 1981.

Dear Mr. Martin:

Millstone Nuclear Power Station, Unit No. 2
Loss of D.C. Power Event of January 2, 1981
Diesel Generator Circuit Modifications

In Reference (2), the NRC Staff documented Inspection No. 50-336/82-~~23~~ which was conducted October 19 - 20, 1982 at the Millstone Nuclear Power Station, Unit No. 2 and at our corporate office in Berlin, Connecticut. The purpose of the inspection was, in part, to determine the bases of additional information provided by Northeast Nuclear Energy Company (NNECO) in Reference (1) in response to NRC Staff inquiries regarding the loss of D. C. event of January 2, 1981. During discussion centered around NNECO's response to Question 3 of Reference (1) we agreed to provide results of an ongoing study of the merits of not tripping the Millstone Unit No. 2 diesel generators upon restoration of 125 volt D.C. electrical power. As per our agreement documented in Reference (2) Northeast Nuclear Energy Company hereby provides a summary of this investigation.

In reviewing the diesel generator trip design NNECO was concerned with providing simple changes that would implement lessons learned from the loss of D.C. event without reducing reliability of the control scheme of the diesel generator sets. Using this philosophy, NNECO completed its review and plans to incorporate the following modifications.


NNECO plans to make circuit modifications to prevent the shutdown of a running diesel upon reapplication of D. C. power (following a complete loss of D. C. to all control circuits). This modification would basically be accomplished by incorporating a time delay relay that would prevent the type of contact race that occurred in the loss of D.C. event. In addition, a modification is planned for the diesel generator fail to start feature. At present the fail to start relay functions to operate a shutdown relay if the diesel engine does not reach a speed of 250 rpm within 12 seconds of start initiation. The shutdown relay (in addition to shutting off fuel flow) energizes the starting air solenoid valves, closing them to conserve air for further starting attempts. NNECO plans to modify this scheme to preclude the possibility of a forced shutdown (via operation of the shutdown relay) in the unlikely event a diesel which starts on an auto-start signal does not achieve a speed of 250 rpm in 12 seconds. The change will be done in a manner which retains the feature that conserves starting air in the event of an emergency start failure. With the incorporation of the above described modifications, the diesel generator would remain running following restoration of D. C. power in an event similiar to that which occurred at Millstone Unit No. 2 in January of 1981.

At present, NNECO intends to perform these modifications by the end of 1983, at which time open item 50-336/81-01-02 (Reference 3) will be closed.

NNECO concludes that the above described modifications will provide increased emergency diesel generator availability without sacrificing reliability. We trust that you will find our conclusions of this study satisfy the Reference (2) commitment and we remain available should the Staff require more detailed information.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President