

**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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June 7, 1985

Docket No. 50-423  
B11560

Director of Nuclear Reactor Regulation  
Mr. B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Reference: (1) B. J. Youngblood letter to W. G. Council, Issuance of Safety Evaluation Report (NUREG-1031), Millstone Nuclear Power Station, Unit No. 3, dated August 2, 1984.

Gentlemen:

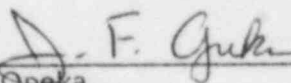
Millstone Nuclear Power Station, Unit No. 3  
Response to Safety Evaluation Report (SER) Open Item No. 2.2

Attached is Northeast Nuclear Energy Company's (NNECO) response to SER Open Item No. 2.2 concerning the diesel generator load acceptance test after operation at no load (SER Section 8.3.1.11). This item was discussed in a telephone conversation with Mr. A. Ungaro of the Power Systems Branch on February 8, 1985, it was agreed at that time that the information provided herein would fully resolve the Staff's concerns regarding Open Item No. 2.2. However, if you have any further questions, please contact our licensing representative directly.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY  
et. al.

BY NORTHEAST NUCLEAR ENERGY COMPANY  
Their Agent

  
\_\_\_\_\_  
J. F. Opeka  
Senior Vice President

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STATE OF CONNECTICUT    )  
                                  ) ss. Berlin  
COUNTY OF HARTFORD    )

Then personally appeared before me J. F. Opeka, who being duly sworn, did state that he is Senior Vice President of Northeast Nuclear Energy Company, an Applicant herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Applicants herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

*Lorraine J. D'Amico*  
Notary Public

My Commission Expires March 31, 1988

SER Open Item 2.2 - Diesel Generator Load Acceptance Test After Operation at No Load

SER Section 8.3.1.11 requests that the applicant provide additional information regarding no load operation of the emergency diesel generator units.

Response

In a telephone communication with the staff on February 8, 1985, the above issue was discussed. It was agreed upon that an actual test run of the diesel generators to show the capability of operation after extended no load operation is not necessary. However, the applicant was advised that additional information on how the deleterious effects of such operation will be minimized is required.

Correspondence with the diesel engine manufacturer indicates that there exists no mechanical limitation within the engine or any of its supportive systems which would limit operation over extended periods of time at rated speed between no load and rated load with the exception of the possible accumulation of combustion and lube oil products in the exhaust system, at the lower loads. Based on the results of a thorough study, the manufacturer suggests that for the PC2 model engine, if a unit is to be operated for periods of time extending over 24 hours and the loads were such that they did not exceed 20% of the engine rating, the engine should be run at above 50% load for at least 1 hour in each 24 hour period in order to minimize the accumulation of combustion or lubrication products in the exhaust system. If these guidelines are adhered to, the manufacturer indicates that there will be no degradation of the engine's ability to accept and carry load after operation at full speed, no load conditions.

The applicant was also requested to provide a maximum time limit that a diesel generator unit will be operated in an unloaded condition. It is estimated that 4 hours is the maximum time that any diesel generator would remain operating and unloaded. The basis of this estimate is a diesel generator start due to an Emergency Safeguards Feature Actuation, without a concurrent loss of off-site power, and the assumption that the diesel generator unit would only remain operating until plant conditions had stabilized, thus permitting a return to the standby mode.

As a means of addressing the possibility of unforeseen extended operation in the no load or light load condition, NNECO will require in the plant operating procedures that:

1. During extended no load and light load operation (less than 20% of full load), the diesel generator unit will be loaded to a minimum of 50% of full load for 1 hour following each 24 hour period of continuous operation.
2. During periodic testing, the diesel units will be loaded to a minimum of 20% full load as recommended by the manufacturer.
3. During troubleshooting and accident conditions, no load operation will be minimized. If these operations take place over an extended period of time (i.e., up to 24 hours), the deleterious buildup of combustion and exhaust products will be cleared by loading the unit in accordance with Item (1) above.