

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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April 19, 1990

Docket No. 50-336
B13496

Re: Generic Letter 89-19
USI A-47

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2
Supplemental Response to Generic Letter 89-19
Request for Action Related to
Resolution of Unresolved Safety Issue A-47

In a letter dated March 27, 1990,⁽¹⁾ Northeast Nuclear Energy Company (NNECO) provided its response to Generic Letter 89-19.⁽²⁾ In the letter, NNECO stated that it would submit its response to GL 89-19, Item (4)(c), for Millstone Unit No. 2 by April 30, 1990. The purpose of this letter is to provide the required information, which relates to reassessment of emergency procedures and operator training for postulated small break loss of coolant accidents at Combustion Engineering plants.

Item (4)(c) states, in part,

It is recommended that all utilities that have plants designed with high-pressure-injection pump-discharge pressures less than or equal to 1275 psi reassess their emergency procedures and operator training programs and modify them, as needed, to ensure that the operators can handle the full spectrum of possible small-break loss-of-coolant accident (SBLOCA)

- (1) E. J. Mroczka letter to U.S. Nuclear Regulatory Commission, "Response to Generic Letter 89-19--Request for Action Related to Resolution of Unresolved Safety Issue A-47," dated March 27, 1990.
- (2) J. G. Partlow letter to All Licensees of Operating Reactors, Applicants for Operating Licenses, and Holders of Construction Permits for Light Water Reactor Nuclear Power Plants, "Request for Action Related to Resolution of Unresolved Safety Issue A-47, 'Safety Implication of Control Systems in LWR Nuclear Power Plants' Pursuant to 10CFR50.54(f) - Generic Letter 89-19," dated September 20, 1989.

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r/d

scenarios. This may include the need to depressurize the primary system via the atmospheric dump valves or the turbine bypass valves and cool down the plant during some SBLOCA. The reassessment should ensure that a single failure would not negate the operability of the valves needed to achieve safe shutdown.

The procedure should clearly describe any actions the operator is required to perform in the event a loss of instrument air, or electric power prevents remote operation of the valves. The use of the pressurizer PORVs to depressurize the plant during an SBLOCA, if needed, and the means to ensure that the R_{NDT} (reference temperature, nil ductility transition) limits are not compromised should also be clearly described.

NUREG/CR-3958, "Effects of Control System Failures on Transients, Accidents and Core-Melt Frequencies at a Combustion Engineering Pressurized Water Reactor" identified the basis for this recommendation as the high core melt frequency for those SBLOCA scenarios where there could be a failure of the high pressure injection function unless depressurization is performed. A relatively high probability for failure to depressurize was assumed because the atmospheric dump valves are dependent on instrument air and the alternative of depressurization with the power operated relief valves (PORVs) was not specified in the Emergency Operating Procedures (EOPs). NNECO has reviewed the Millstone Unit No. 2 EOPs and operator training and has determined that they are adequate for these scenarios.

It should be noted that the shutoff head of the high pressure safety injection pumps is higher than the main steam safety valves lift pressure at Millstone Unit No. 2. Thus, there will be a significant amount of injection even without depressurization assuming auxiliary feedwater is available. This will allow the operators sufficient time to depressurize even with a loss of offsite power and loss of instrument air. The importance of power and instrument air is recognized in the Millstone Unit No. 2 EOPs. Vital bus status and instrument air status are included in the Vital Auxiliaries Safety Function status checklists. These checklists will be used approximately every 10 minutes and will provide assurance that a loss of power or instrument air will be detected promptly and appropriate steps will be taken to restore the systems.

In the event that power or instrument air cannot be restored quickly, the atmospheric dump valves are equipped with a manual operator and can be opened locally. The operators are periodically trained in the manual operation of these valves. Thus, a depressurization with the atmospheric dump valves can be performed even if instrument air is not available. The EOPs also specify a cooldown rate range that will assure that the nil ductility transition limits are not compromised.

Since there are redundant atmospheric dump valves and the valves have manual operators, Millstone Unit No. 2 has a single failure proof method for depressurization during a SBLOCA. If the auxiliary feedwater is also not available,

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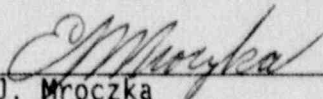
the functional recovery EOPs include provisions for operation of the PORVs to depressurize the system.

In summary, we believe that the existing Millstone Unit No. 2 EOPs adequately address the need for depressurization during a SBLOCA and that the operator training program is adequate in providing the training concerning depressurization.

If you have any questions about the information contained in this letter, please contact us.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

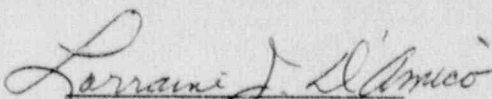


E. J. Mroczka
Senior Vice President

cc: T. T. Martin, Region I Administrator
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2
P. Habighorst, Resident Inspector, Millstone Unit No. 2
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

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

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



Notary Public
My Commission Expires March 31, 1993