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January 22, 1996

Docket No. 50-336
B15469

Re: Generic Letter 87-02;
USI A-46

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

Millstone Nuclear Power Station, Unit No. 2
USI A-46 Walkdown Summary Report and
Proposed Expansion of Licensing Basis for
Verification of Equipment Seismic Adequacy

In Generic Letter (GL) 87-02,[1] the NRC Staff set forth the process for resolution of Unresolved Safety Issue (USI) A-46 and encouraged nuclear power plant licensees to participate in a generic program. In Supplement 1 to GL 87-02,[2] the Staff required Northeast Nuclear Energy Company (NNECO) to include in its response for Millstone Unit No. 2: a statement regarding commitment to Generic Implementation Procedure (GIP)-2, a schedule for the implementation of the GIP-2, and submission of a report summarizing the results of the USI A-46 program. By letter dated September 21, 1992,[3] NNECO

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(1) H. R. Denton to All Holders of Operating Licenses Not Reviewed to Current Licensing Criteria or Seismic Qualification of Equipment, "Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46 (Generic Letter 87-02)," dated February 19, 1987.

(2) J. G. Partlow to All Unresolved Safety Issue (USI) A-46 Plant Licensees Who are Members of the Seismic Qualification Utility Group (SQUG), "Supplement No. 1 to Generic Letter (GL) 87-02 that Transmits Supplemental Safety Evaluation Report No. 2 (SSER No. 2) on SQUG Generic Implementation Procedure, Revision 2, As Corrected on February 14, 1992, (GIP-2)," dated May 22, 1992.

(3) J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "Haddam Neck Plant, Millstone Nuclear Power Station, Unit Nos. 1 and 2, Plant-Specific Response to Supplement 1 to Generic Letter 87-02," dated September 21, 1992.

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committed to implement GIP-2, including the clarifications, interpretations, and exceptions in Supplemental Safety Evaluation Report No. 2 (SSER-2), and to communicate to the NRC Staff any significant or programmatic deviations from GIP guidance. Also, NNECO agreed to submit the Millstone Unit No. 2 Safe Shutdown Equipment List (SSEL) Report, the Relay Report, and the Seismic Evaluation Report within 180 days following completion of the USI A-46 final walkdowns.

In a Letter dated July 7, 1994,[4] NNECO informed the NRC Staff that due to a 1/2 inch fiberboard covering of the exterior walls of the Auxiliary Building, we would need to utilize the guidance provided in Section 4.2.4 of the GIP. In the letter, NNECO provided the NRC Staff with calculations which documented the technical justification for developing realistic, median centered in-structure response spectra for the Millstone Unit No. 2 Auxiliary Building. In a letter dated March 22, 1995,[5] the NRC Staff accepted the results of our structural analysis of the Auxiliary Building for use in resolving the USI A-46 issue for Millstone Unit No. 2.

Millstone Unit No. 2 walkdowns were completed during the Cycle 12 refueling outage. This letter forwards the agreed upon reports, and summarizes the results of the USI A-46 program. This letter also confirms that no significant or programmatic deviations from the GIP guidance were made during the USI A-46 resolution process. Also, this submittal provides NNECO's plans to modify the Millstone Unit No. 2 seismic licensing basis to adopt the GIP-2, including the clarifications, interpretations, and exceptions identified in SSER-2, as one method, in addition to the current licensing basis methods, for verifying the seismic adequacy of plant electrical and mechanical equipment.

USI A-46 REPORTS

Section 2.2.8 of GIP-2, Part I, provides for a plant-specific summary report to be submitted to the NRC Staff, including a proposed schedule for future modifications and replacements, where

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(4) J. F. Opeka letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Generic Letter 87-02, Supplement 1, USI A-46," dated July 7, 1994.

(5) G. S. Vissing letter to J. F. Opeka,"Generic Letter 87-02, Supplement 1, USI A-46 Resolution Millstone Nuclear Power Station, Unit 2 - Floor Response Spectra (TAC No. M69459)," dated March 22, 1995.

appropriate, at the completion of the walkdowns. Further, GIP-2, Part II, Section 9, provides for SSEL, Relay Evaluation, Seismic Evaluation and Completion Reports. NNECO committed in the September 21, 1992, letter to provide the NRC Staff with each of these reports. However, the Completion Report is not included since it is not submitted until all planned actions for resolution of USI A-46 have been completed. Accordingly, all of the reports necessary at this stage of the USI A-46 resolution are attached. This letter constitutes the Summary Report.

USI A-46 Safe Shutdown Equipment List Report (Attachment 1):

Plant electrical and mechanical equipment was selected for evaluation under the USI A-46 program, and included in the USI A-46 SSEL in accordance with the provisions of GIP-2, Section 3. The use of the GIP-2 methodology resulted in the inclusion and evaluation of safety and non-safety related equipment necessary to safely shutdown the plant in the event of an earthquake as required to satisfy the specifications of GIP-2.

Of the safety related equipment identified in the USI A-46 SSEL, some of it may be subject to other specific seismic commitments, including the seismic aspects of 10CFR Part 50, Appendix R, Regulatory Guide 1.97, and other possible specific commitments. The remainder of the safety related USI A-46 SSEL equipment is subject to the seismic licensing basis requirements of the Updated Final Safety Analysis Report (UFSAR). The current submission of this USI A-46 SSEL does not alter any previous licensing commitment or design basis for Millstone Unit No. 2, but will provide support to possible future licensing actions as further explained in this letter. The USI A-46 SSEL report also includes the method for verifying the compatibility of the USI A-46 SSEL with plant operating procedures.

Relay Evaluation Report (Attachment 2):

This report provides the information suggested by GIP-2, Part 2, Section 9.3. A number of outliers were noted in this area, and are discussed below under Outliers.

Seismic Evaluation Report (Attachment 3):

This report provides the information suggested by GIP-2, Part 2, Section 9.4. Outliers were also found in this group of equipment and are discussed below under Outliers.

OUTLIERS

Outliers, as defined by GIP-2, were identified during the walkdowns. These outliers are described in detail in the outlier evaluation sheets found in the attached Relay and Seismic Evaluation Reports. The outliers have been evaluated against the current licensing and design bases and in the instances where deviations were found, Adverse Condition Reports (ACRs) were generated and dispositioned consistent with procedural requirements. Nonetheless, we are continuing to evaluate these outliers, and if they cannot be resolved in accordance with the guidelines set forth in GIP-2, appropriate hardware upgrades will be implemented by the end of the Cycle 14 refueling outage.

NNECO does not intend to leave any outliers unresolved. However, the outliers may be further evaluated by the Seismic Margin Assessment (SMA) which is being performed in support of the Individual Plant Examination for External Events (IPEEE) program.

PRESENT LICENSING BASIS

The licensing basis for determining the seismic adequacy of safety related equipment is summarized in the Millstone Unit No. 2 UFSAR Section 5.8 "Seismic Design." In general, components and systems are required to withstand a maximum horizontal ground acceleration of 0.09g and a vertical ground acceleration of 0.06g, acting simultaneously, for the operating basis earthquake (OBE). For the safe shutdown earthquake (SSE), a maximum horizontal ground acceleration of 0.17g and a vertical ground acceleration of 0.11g are used. Response spectra curves for different elevations in the structures were generated to obtain design seismic input at equipment locations.

LICENSING BASIS MODIFICATION

As indicated in our September 21, 1992, letter and acknowledged by the NRC Staff in a November 20, 1992, letter,[6] NNECO is considering expanding the Millstone Unit No. 2 seismic licensing basis, via 10CFR50.59, to include the use of the USI A-46 methodology as one option for verifying the seismic adequacy of electrical and mechanical equipment covered by the GIP. This

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(6) G. S. Vissing letter to J. F. Opeka, "Evaluation of Millstone Nuclear Power Plant, Unit No. 2, 120-Day Response to Supplement 1 to Generic Letter 87-02 (TAC M69459)," dated November 20, 1992.

methodology is contained in the NRC Staff letter of May 22, 1992, and March 22, 1995. This modification will leave in place the existing (i.e., pre-USI-A-46) licensing basis for each piece of equipment. We are presently evaluating the need to change the design basis of the SSEL equipment. It is our intent that operability analyses of equipment will be conducted according to the licensing basis of each equipment item.

To modify the existing licensing basis as documented in the UFSAR, to allow the use of the USI A-46 methodology in addition to the existing licensing basis, NNECO will follow the applicable regulatory requirements and will report any changes made to the UFSAR under 10CFR50.71(e). In general, the USI A-46 methodology will be made available for future modifications and for new and replacement equipment as described in GIP-2, Part I, Section 2.3.4. Seismic evaluations will be performed in a systematic and controlled manner to ensure that new and replacement items are properly represented in the earthquake experience or generic testing equipment classes, and that applicable caveats are met. New and replacement items will be evaluated for design changes that could affect seismic capacity as determined by application of the USI A-46 methodology.

COMMITMENTS

The following are NNECO's commitments made within this letter. Other statements within this letter are provided as information only.

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NNECO commits to submit the USI A-46 Completion Report after completing all planned actions for the resolution of USI A-46 for Millstone Unit No. 2.

If you have any questions, please contact Mr. George Papanic Jr. at (860) 440-2069.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

E. A. DeBarba
Vice President

cc: See Page 6

Attachments

cc: T. T. Martin, Region I Administrator
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2
P. D. Swetland, Senior Resident Inspector, Millstone Unit No. 2

Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Safe Shutdown Equipment List Report

January 1996