

March 9, 1994

Docket No. 50-309

Mr. Charles D. Frizzle, President
Maine Yankee Atomic Power Company
83 Edison Drive
Augusta, Maine 04336

Dear Mr. Frizzle:

SUBJECT: MAINE YANKEE'S SEISMIC DESIGN MARGIN PROGRAM AND THE SEISMIC
VERIFICATION PROVISIONS OF USI A-46 (TAC NO. M76659)

This is in response to your letter dated November 19, 1993, in which you addressed the remaining four items identified in a comparison between the Maine Yankee Seismic Design Margin Program (SDMP) and the seismic verification provisions of Unresolved Safety Issue (USI) A-46. Specifically, the remaining four items are relay chatter, loss of offsite power, long-term heat removal, and seismic fragility/capacity estimates and walkdown.

The NRC staff has reviewed your letter and concludes that you have provided an acceptable approach for resolving these items. A summary of our evaluation is enclosed. When each phase of your USI A-46 resolution program is complete (July 1, 1994, and mid-1995), please so notify us. This completes our effort on TAC No. M76659.

If you have any questions on this matter, please do not hesitate to contact me at (301) 504-1427.

Sincerely,
original signed by
E. H. Trottier, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
Seismic Evaluation Summary

cc w/enclosure:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 9, 1994

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Mr. Charles D. Frizzle, President
Maine Yankee Atomic Power Company
83 Edison Drive
Augusta, Maine 04336

Dear Mr. Frizzle:

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VERIFICATION PROVISIONS OF USI A-46 (TAC NO. M75659)

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If you have any questions on this matter, please do not hesitate to contact me at (301) 504-1427.

Sincerely,

A handwritten signature in black ink, appearing to read "E. H. Trottier".

E. H. Trottier, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
Seismic Evaluation Summary

cc w/enclosure:
See next page

Mr. Charles D. Frizzle

Maine Yankee Atomic Power Station

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U. S. NUCLEAR REGULATORY COMMISSION
SEISMIC EVALUATION SUMMARY
of
MAINE YANKEE ATOMIC POWER STATION

The results of a comparison between Maine Yankee's Seismic Design Margin Program (SDMP) and USI (Unresolved Safety Issue) A-46 were transmitted to Maine Yankee by letter dated April 29, 1993. Of the nine identified differences between Maine Yankee's SDMP and USI A-46, three were judged to have potential safety significance, and an additional two had unknown potential safety significance.

In Maine Yankee's letter of response dated June 15, 1993, the five items of potential, or unknown potential, safety significance were addressed. (Maine Yankee agreed with the NRC staff determination that four of the nine items identified were very unlikely to be of any significance.)

By letter dated September 17, 1993, the NRC staff responded that the documentation provided by Maine Yankee adequately addressed seismic evaluations of equipment modified or replaced. By letter dated November 19, 1993, Maine Yankee addressed the four remaining items. A summary and NRC staff conclusion follows:

1. Relay and Breaker Chatter: Maine Yankee has committed to perform relay assessments based on the 0.3g NUREG/CR-0098 spectrum. The review criteria and procedures will be provided by mid-1994; evaluation of potential cost-effective upgrades that may be identified through this assessment will be provided in mid-1995, consistent with Maine Yankee's schedule for submittal of the individual plant evaluation of externally-initiated events (IPEEE).

Conclusion: The NRC staff concludes that Maine Yankee has provided an acceptable approach for resolving the relay and breaker chatter issue.

2. Loss of Offsite Power: The Maine Yankee electrical design supplies all safe shutdown equipment from offsite power under normal circumstances, or from the emergency diesel generators or seismically qualified batteries should a loss of offsite power occur. Further, Maine Yankee is a single-unit station, so that any complex interaction between "swing" or shared site power sources is eliminated. There is no impact on the adequacy of safe shutdown systems to perform their intended function(s), should a loss of offsite power not be assumed.

Conclusion: Because Maine Yankee has committed to evaluate spurious relay and breaker actuations, with and without a loss of offsite power, the NRC staff considers this issue resolved.

3. Long-Term Heat Removal: Maine Yankee has reconfirmed the capability of the fire system to provide adequate flow to refill the demineralized water storage tank (DWST) to maintain hot shutdown heat removal capability for 72-hours. In addition, Maine Yankee has committed to perform additional walkdowns and analyses to verify that the DWST can be replenished by the fire system following a major seismic event. (The Maine Yankee fire pumps and their power sources are seismic by design.) These additional walkdowns and analyses are planned for completion by July 1, 1994.

Conclusion: Based on Maine Yankee's commitment to perform verification walkdowns and analyses, the NRC staff concludes that Maine Yankee's approach to resolve the issue of long-term heat removal is acceptable.

4. Seismic Fragility/Capacity Estimates and Walkdown: Maine Yankee intends to use its Seismic Capability Engineers (SCEs) to perform additional walkdowns to ensure that the Generic Implementation Procedure, Revision 2 "caveats" have been addressed for safe shutdown equipment. Further, the assessments and conclusions of the SCEs will be independently reviewed by a recognized expert (seismic consultant) who is familiar with the Maine Yankee plant. This effort is planned for completion by July 1, 1994.

Conclusion: Based on Maine Yankee's commitment to perform additional walkdowns with independent review by a recognized seismic expert, the NRC staff concludes that Maine Yankee's approach to resolve the seismic fragility/capacity issue is acceptable. The staff notes that the results of "caveat" reviews, additional walkdowns, and peer review should be adequately documented for staff examination. A letter confirming the completion of the "caveat" reviews and the seismic expert peer review should be available for staff examination.

The NRC staff concludes that Maine Yankee has provided an acceptable approach for resolving the four residual issues described in this USI A-46 Seismic Evaluation Summary. Subject to satisfactory completion of the licensee's commitments identified above, we conclude that associated TAC No. 76659 is herewith closed.