PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION
Engineering Office:
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November 10, 1982

SBN-362
T.F. B7.1.2

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. George W. Knighton, Chief
Licensing Branch 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
(b) USNRC Letter, dated June 18, 1982, "Request for Additional Information - Mechanical Engineering Branch," F. J. Miraglia to W. C. Tallman

Subject: Response to RAI 210.83, 210.84, and 210.85; (Mechanical Engineering Branch)

Dear Sir.

We have enclosed responses to the subject Requests for Additional Information (RAIs) which were forwarded in Reference (b).

The enclosed RAI responses will be included in OL Application Amendment 48.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

J. DeVincentis
Project Manager

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RAI 210.83

The staff has reviewed the applicant's response to Q210.64 regarding the use of the overlap technique in certain piping system analyses and has found the response to be inadequate. The applicant has not satisfied a required criterion in the application of the analytical technique as stated in NUREG/CR-1980. This criterion specifies that the envelope of the anchor-to-anchor response spectra be applied to each of the sub-problems when performing the dynamic analysis, unless it can be shown that the overlap regions effectively decouple the adjacent sub-problems.

The applicant is requested to submit the following information:

For isometric piping CS system line 303 (drawing 9763-D-8--393; Revision 1), provide a comparison of maximum stresses and all support loads for:

a) the full anchor-to-anchor problem with applicable envelope response spectra, and
b) the overlapped sub-problems with the response spectra used by the applicant for each sub-problem.

RESPONSE

The CS system piping, line 303, has been rerouted. A re-analysis will be performed on a larger version of ADLPIPE. Consequently, the overlapping technique presented in the response to RAI 210.64 for main run piping systems will not be used.

RAI 210.84

The staff has reviewed the applicant's response to Q210.65 regarding the criteria used to assure functional capability of ASME Code Class 1, 2 and 3 piping systems. The applicant's assumption that satisfying Service Level C (emergency) limits assures the functional capability of piping is not valid for stainless steel elbows in ASME Class 2 and 3 piping systems. Thus, we find the applicant's response to be inadequate. For detailed staff comments on the Seabrook functional capability criteria, see Attachment A210.84.

The staff has accepted the use of the functional capability criteria given in General Electric's topical report, "Functional Capability Criteria for Essential Mark II piping" (NEDO-21985) dated September 1978. The staff has also found the Westinghouse criteria used in the Comanche Peak facility to be acceptable.

Provide further justification for assuring the functional capability of stainless steel elbows in ASME Class 2 and 3 piping systems.

RESPONSE

As part of the design documentation for the Seabrook plant, UE&C has evaluated the stress levels of the ASME Class 2 and 3 stainless steel elbows in the following piping systems:

Safety Injection
Chemical and Volume Control (Charging Portions)
Residual Heat Removal
Containment Spray

The review of 100% of the elbows in each of the systems identified elbows which exceeded the functional capability criteria defined in General Electric document NEDO-21985. Corrective action required to meet the functional limit will be taken.

210.85

The staff has reviewed the document identified as 52212-9, "Seismic Analysis, Containment Spray Pumps, 6X10X148B-CD, ASME Section III Class 2," (Bingham-Willamette) Rev. 5, dated 1/3/79. Page 3 of this document includes the sentence: "Pressure boundary parts comply with the requirements of the ASME Boiler and Pressure Vessel Code, Section III and NRC Regulatory Guide 1.48." Please furnish the appropriate design checks (Code NC-3400) that substantiate the quoted sentence.

RESPONSE

The requested design checks will be provided by Dec. 15, 1982 to the NRC.