PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION
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August 9, 1984

SBN- 703
T.F. B7.1.2

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

Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
(b) Generic Letter 84-04, from Darrel G. Eisenhut to PWR Licensees, Construction Permit Holders and Applicants for Construction Permits, dated February 1, 1984

Subject: Alternate Pipe Break Design Criteria

Dear Sir:

The Public Service Company of New Hampshire (PSNH) has been following the recent Nuclear Regulatory Commission actions and nuclear industry developments as they pertain to alternate pipe break design criteria. In Reference (b), the Staff has expressed their intention to revise existing criteria regarding postulated pipe breaks in the Reactor Coolant Loops of Westinghouse-supplied Nuclear Steam Supply Systems. The application of this mechanistic fracture analysis technology to eliminate postulated double-ended ruptures in the Reactor Coolant Loop piping of Seabrook Station Units 1 and 2 is requested herein. In support of this request, a plant-specific mechanistic fracture analysis developed for PSNH by Westinghouse is included as Enclosure 1 to this letter. This report has been prepared in accordance with the NRC guidance delineated in Generic Letter 84-04.

Enclosure 1 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations. Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10CFR Section 2.790 of the Commission's regulations. Correspondence with respect to the proprietary aspects of the Application for Withholding or the supporting Westinghouse affidavit should reference CAW-84-54 and should be addressed to R. A. Wiesemann, Manager, Regulatory and Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230. Enclosure 2 provides a non-proprietary version, which may be subject to public disclosure.

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By way of this letter, PSNH requests that the NRC approve the elimination of postulated breaks in the Reactor Coolant Loop piping of Seabrook Station Units 1 and 2. The technical basis for this request is provided in Enclosure 1; (WCAP-10567 - "Technical Basis for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for Seabrook Station Units 1 and 2"). This report demonstrates that the generic mechanistic fracture analysis performed by Westinghouse in WCAP-9558, Revision 2 ("Mechanistic Fracture Evaluation of Reactor Coolant Pipe Containing a Postulated Circumferential Through Wall Break") envelopes the site-specific parameters of the Seabrook Units. Generic Letter 84-04 documents the Staff's acceptance of WCAP-9558.

NRC acceptance of our request for elimination of Reactor Coolant Loop pipe breaks would result in significant benefits in terms of reduced occupational radiation exposure and cost savings over the life of the units. Quantification of the exposure reduction and cost savings by other applicants (e.g., Duke Power) supports our significant savings premise. PSNH is presently quantifying these and other potential benefits and will forward this information when completed. In summary, justification for our request to eliminate Reactor Coolant Loop pipe breaks and their associated consequences from any further consideration is founded on:

1. Technically sound, NRC-accepted bases.

2. A Reactor Coolant System pressure boundary leak Detection System which meets the requirements of Regulatory Guide 1.45 (see Enclosure 1).

3. Expected significant reductions in occupational radiation exposure and cost savings over the life of the units.

Pursuant to the guidance delineated in Generic Letter 84-04, PSNH hereby formally requests a partial exemption for Seabrook Station Units 1 and 2 from General Design Criteria 4 (GDC-4) of 10CFR50 Appendix A. GDC-4 establishes requirements for protection of structures, systems, and components against the dynamic effects associated with postulated breaks in Reactor Coolant Loop piping. These dynamic effects are specifically defined as the effects of missiles, pipe whipping, and fluid jets. The granting of this exemption will not obviate the effects of Reactor Coolant Loop pipe breaks from consideration as a design basis for our Environmental Qualification Program and Engineered Safety Features design.

The Staff's expeditious review of WCAP-10567 (Enclosure 1) and acceptance of our request for partial exemption to GDC-4, would afford us the opportunity to fully realize the benefits on Unit 1.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

John DeVincentis

J. DeVincentis
Director of Engineering and Licensing

Attachment
cc: Atomic Safety and Licensing Board Service List