

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

before the
ATOMIC SAFETY AND LICENSING APPEAL BOARD

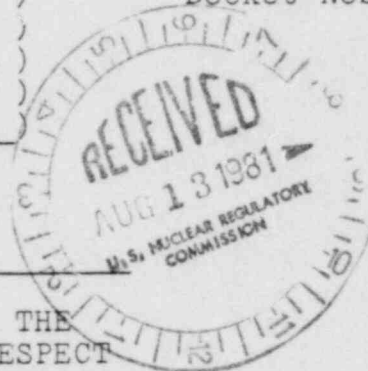


In the Matter of

PUBLIC SERVICE COMPANY OF NEW
HAMPSHIRE et al.

(Seabrook Station, Units 1 and 2)

Docket Nos. 50-443
50-444



ON REMAND FROM THE
COMMISSION WITH RESPECT
TO SEISMIC ISSUES

REPLY BRIEF
OF PERMITTEES

INTRODUCTION

The permittees herewith submit a short reply to the NECNP brief. The reply is confined to a few of the more egregious misuses of the evidentiary record herein. A failure to comment on any portion of the NECNP brief should not be construed as agreement with it. Rather, it indicates that the permittees believe that the matter is either irrelevant or adequately dealt with in their initial brief.

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Reply to the Substantive Arguments

At Pages 4-6 of its brief NECNP seeks to persuade the Board that the testimony of Mr. Holt with respect to plutons forms a basis for the conclusion that the Cape Ann pluton "could generate an earthquake of MMI XII intensity on the Seabrook site." The conclusion is a "leap of faith" unaccompanied by a record citation, and for good reason. Mr. Holt made clear that he thought that localized stress on a fault at the point where a pluton (or other intrusive) interrupts a fault could be an earthquake generator¹; and he thought this was so generally. However, he never even hinted that the mere existence of a pluton interrupting a fault meant that the associated earthquakes, if any, would be of large size (i.e., MMI XII). Nowhere does Mr. Holt even suggest that the size (as opposed to occurrence) of earthquakes can be correlated simply with the existence of a pluton interrupting a large fault. Indeed, he repeatedly pointed out the total lack of geological evidence in New England of large (i.e., MMI \geq IX) earthquakes occurring. NECNP's argument is a wholesale misuse of the Holt testimony.

On Page 16 of its brief NECNP suggests that Dr. Trifunac has accepted what NECNP calls the "linear hypothesis". NECNP says that Dr. Trifunac:

"testified that reliance on linearity 'is a very typical daily process used by hundreds of seismologists worldwide and I meant to say that all of us do this and I just wanted to emphasize this.' (Trifunac, Tr. p. 751, l. 22-24, 776)."

¹ The earthquake is caused not by the pluton, but by the fault.

If NECNP read on they would find that what Dr. Trifunac was saying was that he and hundreds of others, along with Dr. Chinnery, engaged in "[p]utting a straight line through a bunch of points", Tr. 752. Dr. Trifunac was hardly endorsing Dr. Chinnery's "linear hypothesis".

On Page 32 of NECNP's brief we find the following:

"Although the MMI X earthquake that occurred at Charleston left geological evidence, Mr. Holt testified that there is no geologic evidence of prior large earthquakes in the area. That means that before the MMI X earthquake occurred at Charleston, Mr. Holt and the Staff would have argued that it could not occur. (Holt, Tr. p. 405-406)."

This is absurd. Mr. Holt readily acknowledged that the basement in South Carolina is buried under thousands of feet of overburden. Mr. Holt would not have concluded that MMI X could not occur; he would have concluded that no conclusion could have been reached in that area prior to the Charleston event. Per contra in New England the bedrock is near the surface, is well mapped and evidence of prior large earthquakes is totally lacking.

Reply to the Motion to Strike

NECNP at Pages 48ff of its brief renews its objection to so much of the Holt testimony as discussed the probability of an event resulting in $\text{MMI} \geq \text{VIII}$ at the Seabrook site as opposed to the "province" as a whole. NECNP argues that Appendix A does not permit this. Appendix A does not call for the probability analysis of earthquakes at all; Appendix A calls for determination

of the largest historical earthquake or the selection of an even greater SSE based on geological evidence that a larger event occurred prehistorically. The Commission allowed probability analysis into the case. If it be that probability is to be injected into this analysis, nothing is more relevant than the probability of the event at the site. The renewed objection (motion to strike) should be denied.

CONCLUSION

The Board should adhere to its prior rulings as to the seismic issue.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Thomas G. Dignan, Jr., one of the attorneys for the applicants herein, hereby certify that on August 7, 1981, I made service of the within document by mailing copies thereof, postage prepaid, first class or airmail, to:

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