YANKEE ATOMIC ELECTRIC COMPANY

Telephone (617) 872-8100
TWX 710-380-7619

1671 Worcester Road, Framingham, Massachusetts 01701

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FYR 85-114

October 24, 1985

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. John A. Zwolinski, Chief
Operating Reactors Branch No. 5
Division of Licensing

References:
(a) License No. DPR-3 (Docket No. 50-29)
(b) YAEC Letter to USNRC (FYR 84-74), dated July 9, 1984
(c) YAEC Letter to USNRC (FYR 85-01), dated December 31, 1984
(d) YAEC Letter to USNRC (FYR 85-14), dated February 13, 1985

Subject: SEP Topic III-2 and III-4.A Additional Information on the Tornado Cost-Benefit Evaluation

Dear Sir:

As a result of a conference call on October 21, 1985 between the staff and Yankee on the Yankee Nuclear Power Station tornado cost-benefit analysis, we are enclosing a copy of a supplemental report entitled, "Tornado Cost-Benefit Analysis for Proposed Backfits at Yankee Nuclear Power Station." This report presents the methodology and details associated with assessing the risks for tornado winds and the change in risks for potential backfits. A summary of the results contained in the attached report was sent to the staff in Reference (b).

Some background on the evolution of the review of the tornado cost-benefit issue might be helpful to the staff in their review of the attached information. The original issue of the evaluation was submitted to the staff on July 7, 1984 (Reference b). A meeting was held on November 15, 1984 between representatives of Yankee and the SEP Branch to discuss staff questions raised during their review of our original submittal. In response to those specific staff questions, Yankee revised the Tornado Cost/Benefit Evaluation and submitted Revision 1 on December 31, 1984 [Reference (c)]. Principal changes include the addition of a discussion of tornado missile probabilities; more specific information regarding structural analysis criteria; and a detailed explanation of the PRA techniques employed.

Also, as agreed in the November 15 meeting, Yankee submitted a package of sample calculations which were representative of the analytical methodologies employed in the cost-benefit evaluation [Reference (d)]. The calculation covered analysis of a tank, specific block walls and structural steel.

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All the submittals support the fundamental conclusion that the design windspeed for the Yankee plant should be the 10^{-4} upper 95% windspeed of 110 mph; that at this windspeed there would not be any missiles; and that with the Cable Spreading Room upgraded, there is no structure or component which stands out as a major contributor to risk.

We trust that the enclosed information will enable the staff to complete their review of this issue. If there are any further questions, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

John D. Haseltine
Project Manager
Yankee Project

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Enclosure